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RETRO GAMER*

ISSUE TWO

RETRO GAMER* ISSUE TWO
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COMMODORE UNCOVERED

FROM THE PET TO THE C64 AND BEYOND

RETRO COLLECTOR

RARITIES REVEALED PLUS PRICE GUIDE

FANTASTIC DIZZY

THE OLIVER TWINS INTERVIEWED

eMag

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hello

Retro Gamer returns, slightly earlier than expected. The original plan was to publish four times a year, but issue one has proved so popular, with many shops completely selling out within the first fortnight, that the decision has been taken to increase the frequency. The magazine will now be published bi-monthly, so you can look forward to six copies a year. We've also added an extra 16 pages of retro content. And here's the best bit – with your continued support we may be able to further increase the frequency and pagination of Retro Gamer. If that sounds appealing, why not turn to page 77 and consider our subscription offer?

Previously on this page I asked for your feedback and you certainly responded. We've been flooded with hundreds of emails and letters, and a selection have been printed in this issue. Your opinions are important, especially as we're still in the process of shaping the magazine. You should find a reader survey tucked somewhere inside the magazine. I'd be grateful if you could answer the questions and send them back to us. It's freepost (if you live in the UK) and five readers stand a chance of winning an Atari 10 in 1 games console plus a year's subscription to the magazine. In addition, there's a section where you can submit your favourite three games. The Top 100 Retro Games feature in issue one has raised a few eyebrows, so why not have your say and set the record straight? The votes we receive will be used to compile a readers' favourite games feature in a future issue.

Remember, if there's something you'd like to see in Retro Gamer then please get in touch. Some of the features in this very issue have been suggested by readers. With that in mind, I'll leave you to enjoy the magazine and the coverdisc. Until next time.

MARTYN CARROLL
EDITOR

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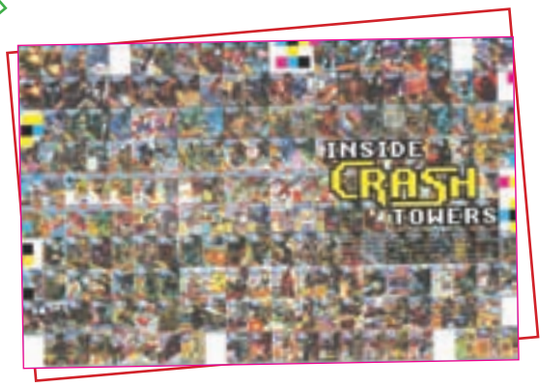

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retro news

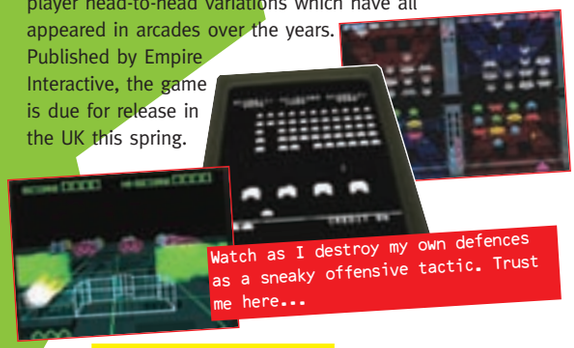
Things you should really know in the world of retro

Space Invasion

Space Invaders anniversary sparks merchandise madness!

This year marks the 25th anniversary of Space Invaders, Tatio's legendary arcade game. That's right – it's a quarter of a century since man first defended the skies against the line-dancing aliens, and a series of tie-in products have been launched to celebrate this milestone.

First up is the news that a Space Invaders compilation is honing in on the PlayStation 2. Featuring a pulse racing (and potential RSI inducing) nine variations of the game, Space Invaders Anniversary Edition has already racked up sales in excess of 100,000 following a Japanese release. The collection includes the original upright, tabletop and two player head-to-head variations which have all appeared in arcades over the years. Published by Empire Interactive, the game is due for release in the UK this spring.

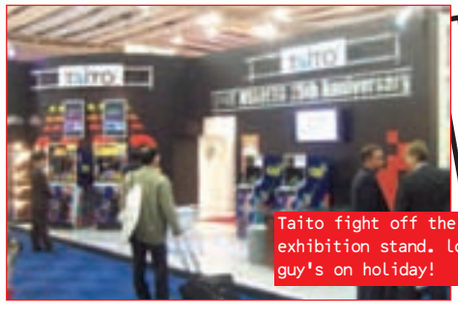


Watch as I destroy my own defences as a sneaky offensive tactic. Trust me here...

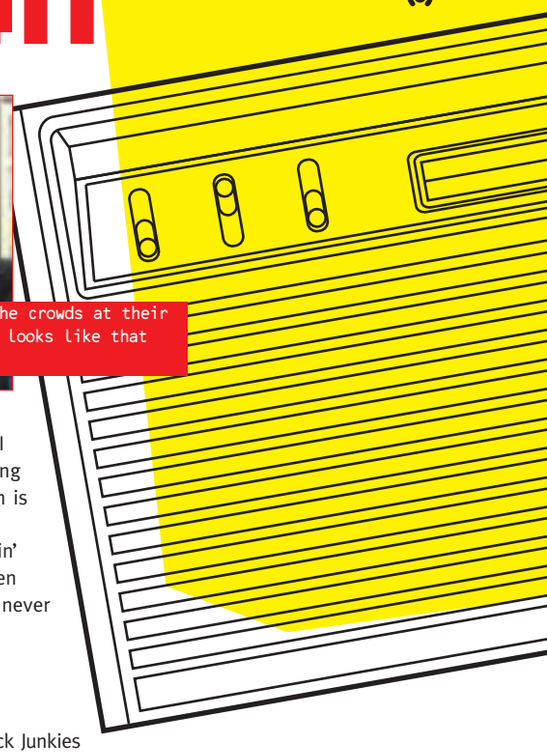
Arcade Action

Better news still, this spring also sees the release of Silver Edition Space Invaders arcade machines! Taito has teamed up with Namco to launch these amazing new units, recently previewed at the ATEI show in London. Although the games will be based on the PS2 Anniversary Edition, it does mean you can pop your Hubba-Bubba on the dash for safe keeping, pump up the volume on your personal stereo and transport yourself back to the good old days.

Speaking of personal stereos, what better tunes to be listening to while blasting space scum than Space Invaders – The Official Album! Published by EMI records, this audio compilation features a startling fourteen tracks inspired by the game. The album is a curious mix of trance, dance and, um, Space Invader sound effects – flip-reversed into a blazin' new mix by a number of big names including Ken Ishii, Sketch Show and Mijk Van Dijk (no, we've never heard of them either).



Taito fight off the crowds at their exhibition stand. Looks like that guy's on holiday!



Dress to Impress

In yet another tie-in, gaming garment kings Joystick Junkies have revealed a brand new range of, wait for it, Official Space Invaders clothing! It would appear that times have changed from those heady days when the game first hit arcades, and fans of the arcade game are now considered more chic than geek. Check out some of the sweet models wearing alien invasion motifs if you're still in doubt. The clothing range was launched at an exclusive party in Soho, which gave promoters a neat way to tie-in all of these Space Invaders announcements. Regardless of whether it's a celebration or a cash-in, it looks like being a big year for this arcade classic.

"It's not just a job, I really believe in the product. Aliens rock"

Island Treasures

Dropzone hidden in new Pool Paradise game

Lead by industry veteran Archer Maclean, Banbury based development studio Awsome Developments has almost finished work on their latest stick and ball simulation, Pool Paradise, for the PC, PS2, GameCube and Xbox. Aside from a massive tournament, novelty shaped tables and a selection of fairground style mini-games, the sandy beaches of the game's island locale hide an old arcade hut, where players can indulge in a perfect reproduction of Archer's first hit, Dropzone. Originally released in 1984, the code has been duplicated line for line, making it a truly authentic piece of retro history – only you'll need to shell out £40 instead of 10p to play it. Inflation eh?

See the shiny balls? Poke them into holes, then go and play Dropzone

NES SP?

GBAs modelled on the NES on sale in Japan

In tribute to the ever-popular NES, Nintendo has announced the imminent release of a new GameBoy SP modelled on the classic console. Unlike the limited edition handhelds that were offered out as prizes on the anniversary of the NES, these new babies will be readily available for all discerning fans to pick up in stores on February 14th(in Japan at least).

Sporting a retro friendly white-based body and red buttons, the collector's edition machine will retail for the same price as normal GBA SPs. Even better news comes in the shape of ten NES games ported over onto special game cartridges to coincide with the launch. Gamers can expect to pick up Super Mario Brothers, Donkey Kong, Ice Climber, Excitebike, The Legend of Zelda, Pac-Man, Xevious, Mappy, Bomberman, and Star Solider for a delightfully discounted price, although no European release has been confirmed so far, meaning import specialists may be the only avenue open at present.

Doesn't it look lovely? Shame we can't buy it over here...not yet anyway

Saturday is Retro Day!

Museum of Computing now open to the public

Swindon is setting the scene for a series of wonderful weekends, thanks to their new Computer Games exhibition at the Museum of Computing. The first Saturday of every month until May will see their doors open to Retro fans from across the country, with themed competitions and events based around industry defining moments in gaming.

Check out the website (**www.museum-of-computing.org.uk**) for a full list for your diaries, but as a teaser, you can look forward to over 90% of the exhibits being in full playable condition for the likes of Nintendo Day and Atari Challenge. A certain blue hedgehog will also be making an appearance. Opening times are from 9am to 1pm, though these may be extended if there's enough interest in the events.

If you can help out at all, the museum are looking for loans of rare items for the exhibition, including the following machines: Atari 5200, Colecovision, Sega Master System 1, Nintendo Virtual Boy, PC Engine and Neo Geo systems.

Remembering the good old days at the Museum of Computing in Swindon

N-Gaging the Past

Virtua Cop returns as Sega strike a deal with Nokia

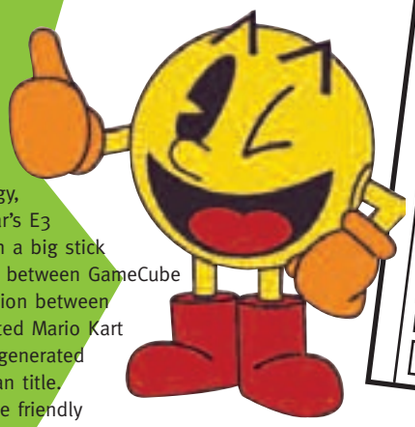
News has just reached us, detailing a strange coalition between mobile phone giants Nokia and the mighty publishers, Sega. In apparent support of the worryingly low-profile 'phonsole' N-Gage, Sega are releasing ports of both sharp shooter Virtua Cop, and tank blasting Alien Front, later this year.

Both games will take advantage of the Bluetooth technology of the N-Gage, for wireless multiplayer fun. While it's nice to see classic games making a reappearance on new machines, the poor take-up figures of the N-Gage, coupled with persistent complaints about fundamental design flaws, doesn't bode too well for sales of the two titles. With Sega's new leading man hinting at a change in focus for the company (heading back to arcade machines and away from the home console market), we're suspect this venture may not help matters much.

A lightgun game on a hand-held console? It's just crazy enough to work. Maybe

Pac-Racer!

New Pac-man game races into view



In the midst of announcements for groundbreaking, big budget titles, new technology, wireless communication and online play, last year's E3 exhibition saw Nintendo fighting back critics with a big stick labelled 'connectivity'. Pushing the umbilical link between GameCube and GBA, the company insisted that this interaction between machines was the way forward. The critically slated Mario Kart Double Dash aside, the only other interest they generated was through the announcement of a new Pac-man title.

Now Namco has announced that the link-cable friendly versions of everyone's favourite pill popper will be bundled exclusively with the forthcoming R:Racing, the latest game in the popular Ridge Racer series. It's unconfirmed at present whether or not Pac-man will ever see the light of day outside of the Namco bundle, so if you're secretly desperate to play Pac-man with your mates, you're going to have to fork out for R: Racing first. The bundle is set for launch in Europe on March 26th.

Eat pills in a four-way link-em-up frenzy, so long as you buy the racing game first kids, which is a shame

Fresh Prince

Prince of Persia 2 confirmed

Following the massive critical acclaim for Ubi Soft's epic time-shifting adventure, the company has announced that production on a sequel to Prince of Persia: The Sands of Time is currently underway. Whilst the new 3D adaptation of the game is undeniably impressive, retro fans were also delighted to find hidden versions of the first two Prince of Persia games, and a specially created 3D remake of the first level from the original game, scattered throughout the PC and console versions. The new game will once more feature a completely fresh script for the Persian adventures, but there's still a wealth of old versions, remakes and original code just begging to be included as bonus features in the game. Watch out for more info on this one as soon as we can prise it away from Ubi Soft.

Dash, dash, parry. Feel the might of my steel and the flow of my baggy pyjama bottoms

80s Throwback

New Knight Rider game around the corner

The man, the mystery, the shocking perm, the sentient car ... Knight Rider turbo boosts through a conveniently placed pile of cardboard and hits PC and consoles once again, later this year. The legendary Saturday prime-time show has legions of fans worldwide, and Koch Media produced a fairly disappointing game based on the series last year. Criticism and complaint from the media and the public at large have been taken on board, and Knight Rider 2 might just be the answer to every child of the 80's prayers – a chance to really feel like the awesome KITT is completely under your control. We can only hope that some of Hasselhoff's stunning musical achievements will also be included to round off the perfect product, perhaps as a collectable bonus disc.

Bonnie, in a sexy mechanic's jumpsuit? Good times, not forgotten

High Kicks

The Dragon Twins reunited

Back in the days when scrolling beat-em-ups were the future of gaming, one title stood proud above all other pretenders to the throne. Featuring twin brothers with big hearts and even bigger fists, Double Dragon became an institution. It's been far too long since Billy and Jimmy Lee were kicking bad guys to the ground, which is why we're keen to see the UK release of Double Dragon Advance on GBA. Currently only available in the US, the game features all new modes of play, including co-op, survival and versus, as well as new levels and boss characters to defeat. Defend your honour, rescue the girl, and battle your twin for her affections... it doesn't get much better than that! Check out your import stores, and then petition your MP for a European release.

Beat up bad guys, laugh at their taunts, then scrap with your brother to bed the wench!

eMag

The RETRO FORUM

your letters make us warm...

Sounding off

May I start off by saying how excited I am by your new magazine, Retro Gamer. I rushed out to buy my copy this morning and, while I've not had a chance to read through very much of it yet, it does look like a very nice magazine indeed. I sincerely hope you can keep this going for many years to come!

I thought I would suggest a topic for an article that I'm sure would be popular for a future issue. I was a big C64 fan for a number of years during the 1980s and the thing that has stayed in my memory better than anything else from that period was the music, courtesy of the wonderful SID chip. A number of great computer musicians rose to virtual fame at the time, including such greats as Rob Hubbard, Ben Daglish, Martin Galway, David Whittaker and many others. While the games themselves have faded into the past (or perhaps weren't that good to start with), the music lives on in the memories of a great number of retro fans today.

I could see great scope for an article looking into what made this music so popular. It could also reveal the tricks the artists used to squeeze as much as possible out of the SID chip, and give information on the musicians and what they're up to these days. I'm sure there's plenty more too. While on this subject, it would be good to point out that **www.C64Audio.com** are still actively making remix CDs of the classic C64 music, brought up to date with the latest technology in computers and synthesizers.

I hope that gives you something to consider for issue two, if there's anything I can help with or any information I might be able to provide then I'd be more than happy to assist.

Adam Dawes, via e-mail

RG: Thanks for the suggestion, Adam. I owned a Spectrum in my younger days and was always envious of my friend's C64. Not because of any game in particular, but because the music always sounded so good! There's some information on the SID chip in this month's Commodore Uncovered feature, but I agree – a dedicated feature, perhaps about game music in general, would certainly be interesting. One for a future issue I think.

Praise and grumble

Hi Martyn. I'd like to start by saying that it's truly a great and monumental thing to see a dedicated retro gaming magazine on the shelves. The writing is passionate and informative, and the subjects of the articles are clearly

researched, with some amusing comments made – I thought that the new Lord of the Rings games were just fancy Golden Axe rip-offs too! The advertising gallery was a great idea and was actually the first thing I saw when I opened the magazine (seeing the ZX Spectrum ad forced a laugh in WHSmiths, to the surprise of the elderly gent next to me).

I'd love to see a feature on the game box cover artist 'Wakelin' (or 'Wako' as he signed some of his work). I think he primarily illustrated Ocean games. Maybe it's just me thinking this, being an graphic designer myself, but I'd like to know what happened to him and what other work he has done since. I'd also like to see a cover CD of retro game tunes. I defy anyone to listen to the menu screen music to Don Priestly's Trapdoor on the Spectrum and not be impressed. The chunky distorted bass drum and snare sound get me every time! I can also remember getting a covertape from Sinclair User containing arcade music (Ninja Warrior, Gemini Wing et al) and wearing it out in my enormous, battery-hungry Walkman. Perhaps an article on game music would be a good idea.

My only niggle about the magazine is the layout and look. The cover of a magazine is so important, especially a first issue, and I feel that it missed the mark. Although the font used is obviously a homage to the iconic Atari typeface, it sits uncomfortably with the rest of the visuals. With regards to the images on the mid to bottom right hand of the page, it would have been nice to see an illustration instead of a few cut and paste images. I hate to go on criticising a magazine with such great potential and ideas but feel a visual continuity check is needed throughout. The Top 100 Retro Games feature was ruined for me by the fact that half the images of the cover art were spread 50/50 over the middle of the two pages, thus losing about 40% of the images in the fold in the middle where the magazine is bound.

I hope you find my comments helpful in some way and I would like to say again that it is great that someone has had the balls and commitment to finally put out a magazine dedicated to retro gaming.
Chris Williamson, via email

RG: **I'll put my hand up on behalf of the team and admit we messed up with the Top 100 feature. We certainly didn't intend for the boxart to be swallowed up in the gutter. I'm surprised you didn't like the cover though. I'm quite fond of it myself.**

Thanks!

Thank you for a wonderful magazine. Such a publication has been begging to be made – the audience is definitely there – and I was disappointed when other efforts seemed to be restricted to either one-off special editions or small sections in modern gaming mags. The great thing about a regular mag is that you can cover more games that people can relate to, as opposed to worrying about the balance between different platforms and how much coverage they all get.
Dan Gassis, via email

Feature ideas

Martyn, I have just read your first issue of Retro Gamer and found it very interesting if, in places, a little controversial (I'm referring to your top 10 games by platform here). However you make a request for feedback so here is my two pennyworth with respect to a few possible articles.

Preservation of tapes. There are some fantastic Web sites dedicated to both keeping the memory of these machines and games alive and preserving the 'programs' (games, utilities, educational programs etc) before the old formats literally give up the ghost. I think it would be interesting to cover how old games are preserved digitally. This would be a slightly technical article but might help your more casual readers.

Sales and Prices. It's okay writing about the hardware and software of days gone by but many people actually want to own the originals. So how about a series of articles about how and where to buy hardware and software, and the 'realistic' prices you can expect to pay. The sort of things that come to mind are eBay, car boot sales and charity shops. Possibly a page of recent prices for comparison. Could also be of interest to see what some of the serious collectors consider to be most obscure, hardest to obtain games.

Interviews with game authors. Many authors are still around and active in some part of the game's industry. Indeed some of the authors still produce games for the old platforms and new games are still being produced (example **www.cronosoft.co.uk**).

Arcade emulation. As you are no doubt aware MAME is considered to be one of the main platforms for emulating arcade games. There could well be interest in an article on how to build your own MAME machine. Maybe even do it over a few issues and give the resulting cabinet away as a competition prize.

Anyway, enough of my ramblings. As you say in the introduction, there is much ground to cover and other people will no doubt have their own ideas for features. Regards and good luck.
Tony Barnett, via email

RG: **I'm keen to open up a collecting angle in the magazine, and I've started the ball rolling in this very issue. There will be another collecting feature in issue three, and a couple of interviews with famous programmers. Game preservation is a great idea for a feature, as it's probably a job most people take for granted when they download software from archives. I'll pencil it in.**

Proper retro

Dear Martyn. Having got hold of Retro Gamer I've finally finished reading it from cover to cover. It's great and something I've waited a long time for. I have one comment. It would be great if you printed actual program listings for the Amstrad CPC 464 and a like. If not, do you know of any good resources were I can get program listings for the Amstrad CPC 464 or even the ZX81?

Carl Brooks, via email

RG: I still have nightmares about typing in program listings, so it's unlikely I'd feature them in the magazine!

Memory bank

Firstly, thanks for producing this publication. At last someone has got around to looking at the birth of the gaming industry in this country. I remember the ZX Spectrum with great affection, from my first 16K model to my final heavily modified 128K version, with a brace of Microdrives, colour printer and the indispensable Multiface.

Your Miner Willy and Software Projects retrospective was perfect. How about one on Ultimate or Imagine? Who can forget the first time they saw Jetpac running on a 16K machine? I can tell you where I was and who I was with (the date escapes me though). However I must take issue with your Top 10 Spectrum Games though. Where are Jetpac, Horace, Tomahawk and anything featuring the Piman?

I still own a Spectrum and although it is long past retirement, its spirit lives on. This email is being written on a Nokia 9210 with the ZX9200 emulator loaded, so when I'm on the move I can still nail the odd Thargoid! Finally, with regard to the magazine, keep up the good work and more of the same please. How about a look at arcades in the 80s or the head to head battles about which was the better system, the Spectrum or the C64?

Jim Poole, via email

RG: I don't think we need to resurrect the old Spectrum vs C64 argument do we? I feel it's redundant anyway, as the Speccy wins every time ;)

Likes and dislikes

Hi. Just bought Retro Gamer issue one and have decided to send you my thoughts. I'll start by saying that I'm very impressed, although there a are a few things I think could be improved, but you DID say not to hold back...

The first thing I didn't like was that retro-style font you use for section headers – the large, mock-pixelated font. I know it's all very retro but it's a bugger to read and very hard on the eye. The second thing that struck me was how few screenshots there were in the magazine. You showed a lot of game packaging, which is good, but we need to see screenshots of the games in action! Your 100 best games feature, for example, was crying out for them. Your article on emulation was too short – I guess this was just to give people an idea about the scene but you could easily do a large feature just on MAME alone (which would be great, by the way). Then maybe concentrate on console emulators, computer emulators in separate features. Just a thought...

I like the article on Mastertronic. Focusing on well-known retro publishers is a great idea and I welcome more such features. Having adverts from the day is a GREAT idea – brings back a LOT of memories. More please. It would also be cool if you did a feature on magazines of the day (Zzap, Crash etc). Maybe you could do something on Zzap issue 107 – which, in case you weren't aware, was a special one-off released two years ago by Zzap fans. I'm not just mentioning this because I wrote in it. Honest guv!

Anyway, that's about it. As I said, I really like the magazine and it's a great first step. I really hope it's a success. I'll certainly be buying the next issue (and encouraging fellow retro-types to do the same). Good luck, and I look forward to the next Retro Gamer.

Andy Haywood, via email

RG: Several readers commented about the heading font. We've changed it slightly for this issue. The Inside Crash Towers feature in this issue is a direct result of your email. Keep the feature suggestions coming!

Long time coming

Dear Martyn. May I first congratulate you on the release of Retro Gamer issue one. Like many long-time gamers, I've waited years for a publication like this, and if the first issue is anything to go by, I can't be wrong in saying that this will surely go from strength to strength.

In your intro to the first issue you ask for feedback, so here's mine. First, the article title font. I've been reading the Retro Gamer forum and I see a number of other people have found the article headings difficult to read. I must agree with this. Perhaps a change of font is required here?

Letter page. No magazine is complete without a letters page. Obviously this was not possible with issue one, but I think that this is vital in creating a community amongst the readers of the magazine. Sure, the forum is an excellent way for the readers to air their views and opinions, but nothing beats having printed letters in the magazine.

The Mastertronic article. This was a real joy to read. If possible, perhaps each issue could cover a company from the past and in this much detail? In my opinion this was one of the highlights of issue one. Truly brilliant stuff – the low down on the titles and sales figures was great to see.

The CD ROM. I've yet to try anything on this yet, but I really like the brief description you have of each title in the magazine. How about picking a few of the best titles from each genre and recommending them? There are loads of titles on the disc, and it would be nice if us readers could be pointed towards some of the best on each disc.

Retro Compilations, e.g. Midway Arcade Treasure. If possible, could you review these retro packages? Many of us are interested in purchasing these, and it would be great to know if the packages are good value for money, faithful reproductions, what extras are featured etc. I've tried numerous retro packages over the years, and whilst some have been great, others have been dire. The number of crap Pac-man conversions I've played amazes me.

That's it for the moment! Many thanks for taking the time to read this. Keep up the fantastic work. I look forward to reading the issue 2.

Robert Hazelby, via email

RG: Thanks for the positive comments. I'm looking to introduce review pages in issue three, covering retro remakes, commercial retro compilations and even new games released on old platforms.

Fantastic!

Hello! I recently picked up an issue of your Retro Gamer magazine, and it's quite simply fantastic. I've bought magazines in the past that have retro sections, but most of them tend to gloss over the details and more obscure things, but now I have a magazine to call my own!

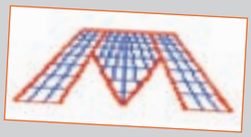
In particular, I enjoyed your advertising gallery, with special note to the Ultimate Play The Game advert. Will you be covering more years like this? However, there are just a few things I would like you to consider. In the Top 100 Retro Games feature, I was dismayed to see that there were no NES games. Will you be covering NES games in the next issue?

What exactly do you define a Retro Game as? Is it dependant on age, or type? For example, I consider most 2D-style games, like run-and-gun shooters or vertical scrolling shoot-em-ups, as retro (e.g. Ikaruga, recently on the GameCube). Finally, will you be covering more companies, like you did with Mastertronic? Maybe Data East, as they closed down recently, I believe. Anyway, I can't wait for the next issue!
Ant Cooke, via email

RG: **The NES was left out the Top 100 feature because it didn't really have the same impact in the UK as it did in Japan and the US. There will certainly be Nintendo coverage in upcoming issues. Classifying retro is not easy, although I tend to generalise that any format not commercially supported can be classed as retro. This does lead to confusion though. Is the PSone retro? What about the Dreamcast? I'd like to hear what other readers think about this.**

More suggestions

To the Retro Gamer team. I've been waiting for a regular retro magazine for a long time. I've been playing games since the days of the Atari 2600, and I find many of the older games are still very playable today.



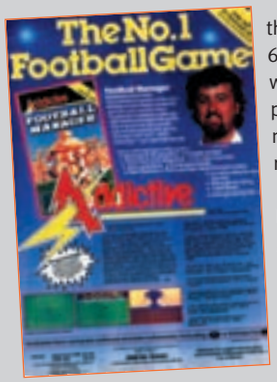
I enjoyed reading the article on Mastertronic. It was good to know how they started and finished. It would be great to read about other companies. My favourites are Vortex, Ultimate and Incentive – Driller was a landmark game and I would love to read how they achieved the Freescape effect on such low-powered machines. I also enjoyed the Sinclair article as the Spectrum was my main computer, and I hope in the future you cover Commodore and Atari in the same way. The advertising gallery is great and I hope this continues too. It may be difficult but it would be nice to see interviews with people like Rob Hubbard. I loved the music he created on the Commodore 64 and would like to find out what he's up to now. And lastly, a few pages dedicated to retro coin-op machines would be great.

I hope the magazine is a success and look forward to the next one.
Justin Dale, via email

RG: **Another call for a feature on C64 music. It's certainly looking very likely. Freescape would also make a fascinating feature – I'll look into it. Hopefully a feature on retro coin-ops will appear in issue three.**

Memory lane revisited

Dear Martyn. I have just finished reading the first issue of Retro Gamer and would like to say thanks for the trip down memory lane. I thought the magazine had some excellent, if sometimes overlong (the Mastertronic piece) articles and I liked the Top 10 of each platform. The coverdisc was packed with some great games and I am still working my way through them at this time. I also laughed out loud at the claims on



the retro adverts you featured. I mean, 64K of RAM – WOW! But hey, at the time I was impressed and looked forward to payday each month when I would treat myself to one or two of the latest releases.

My biggest gripe would be the headers of each article. I know you're going for the retro look, but it is a bit garish and at times took me several attempts to decipher what the words were. Maybe my eyes are going after all the long years staring at monitors.

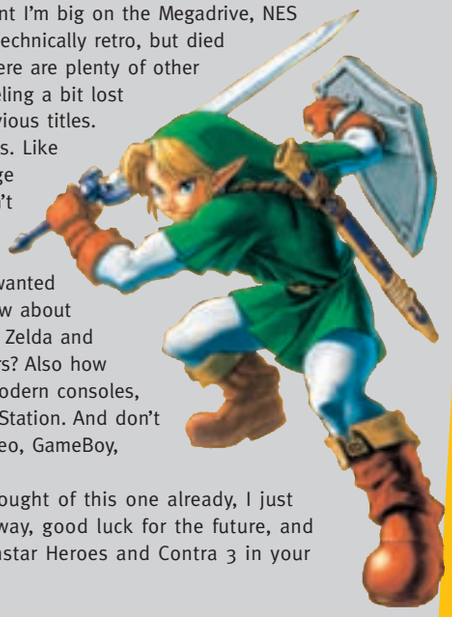
Anyway, on the whole well done for a great new magazine, and I look forward to seeing the next issue.
Paul Edwards, via email

Dark days ahead

To Retro Gamer. I have always believed that a good game is a good game, regardless of format, age or developer. So it sickens me that so many modern magazines take every opportunity to snigger at old games and then give ridiculously high scores to modern efforts.

I therefore can't underline how important I think it is that your magazine takes off and hopefully spreads the good word about classic games. Video games are entering dark times at the moment, with the industry slowly collapsing in Japan, and many recent games bearing more than a passing resemblance to GTA III and Goldeneye. Anyway, here are a few suggestions for the magazine.

Reviews. I collect video games on all formats and it really annoys me that I have very few resources for finding out which old games are worth buying. At the moment I'm big on the Megadrive, NES and Dreamcast (maybe not technically retro, but died before it's time). I'm sure there are plenty of other retro collectors out there feeling a bit lost once they've bought the obvious titles.



Broader range of consoles. Like you said, retro is such a large subject area that you couldn't possibly please everyone in one issue. But still, where were the 8-bit consoles? I wanted the top ten NES games! How about Super Mario 3, Mega Man 1, Zelda and Battle of Olympus for starters? Also how about some info on more modern consoles, such as the Saturn and PlayStation. And don't forget the handhelds! Neo-Geo, GameBoy, Game Gear...

Letters. You probably thought of this one already, I just thought I'd mention it. Anyway, good luck for the future, and thanks for not ignoring Gunstar Heroes and Contra 3 in your top 10s!
Alex Ellis, via email

RG: **With a new range of consoles due in the next year or two, I can't really see the industry collapsing just yet. I think a feature on retro handhelds is a very good idea, and I already have someone working on it for issue three or four.**

Take a breath!

Dear Martyn. First of all, my praise for issue one of Retro Gamer. Being an older gamer (I remember at

least the latter 70s and the birth of arcade games and the culture it produced), it's always a joy to see a games magazine have a section on old games, but a dedicated magazine – that's even better! My applause to you. I'm sure there are many people like me out there that love old games, and I feel that old games generally do not get the recognition they deserve. Not only is retro (gaming) cool, but it does actually mean something too, even if just to older gamers like me.

Which brings me initially onto the top 10s you produced. Whilst being a great idea, I have to disagree quite strongly with the Commodore 64 selection of games (being somewhat of a C64-biased gamer). I of course realise that naming only 10 games from 1000s is a hard task, but I have trouble with the ones Ben Alsip chose. For example, Delta described as the best shooter ever? Whilst I agree that it is a good shooter (with the best soundtrack ever – I still enjoy it today), the pure predictability of the waves of enemies (after many lives lost) is its drawback. I love the game, but to compare it to R-Type? I don't think they're in the same league. If we are talking top 10 shooters on the C64 there is only one word: Armalyte. This had everything – short but utterly enticing soundtrack, amazing gameplay (especially two player) and graphics which pushed the Commodore to its limits.

I also must disagree with Rimrunner being in the C64 top 10. Whilst being a good game, has Mr Alsip never played games such as Impossible Mission or Wizball? Surely these two games deserve some recognition at least. Even by today's standards they hold their own. They must surely be an example of the greatest games ever made. And Wizball – what a completely unique and brilliant concept. How he can put Rimrunner is his top 10 and neither of these two games baffles me.

For the Amiga top 10 games – missing out Superfrog was a crime! I could bicker about your top 10 games all day, but I won't. I've never been inclined to write into a games magazine before. Your issue one encouraged feedback to help the magazine, which I hope I'm doing in this letter. I loved much about your magazine – especially the reproduction of old hardware and software adverts. However, where were the game screen shots for each top 10 game? The original game art on boxes was good to see, but lots of it was obscured by the magazine centrefold for 50% of the games!

I'd also like to point out a major error in your BASIC listing on page three of issue one. You did not need line '30 Run'. Simply 'run' would have sufficed! The program would never have gotten past line 20 – or was this a test?

I want this magazine to succeed just as much as yourselves. It would also be nice to see future coverage of subjects like game music, something I'm a big fan of. The C64 music scene has never been stronger. I'm sure there are many more retro-related topics you will cover. Your retro-spectively.

Mark O'Neill, B.Sc (hons), via email

RG: **Ben stands resolutely by his C64 top 10. Actually, I'd pay to see the pair of you argue it out over a couple of pints! To tell you the truth, I asked the writers to throw in a couple of surprise choices in the interests of debate. I guess it worked. Thanks for pointing out the error in the program listing. From now on I'll demand that our designers test their snippets of code before printing them in the magazine.**

Atari action

Hi Martyn. Firstly a big thanks for getting a retro games magazine out as a whole rather than relying on the odd special. But can you guys not make the same mistake as every other magazine that covers retro. Please remember there was a home computer out long before the Sinclairs and Commodores called the Atari 8-bit – not the 2600 or 5200 consoles, but a real, solid home computer. The only coverage you ever see that's Atari related in UK mags are the consoles or the ST, which is daft because some of the best loved games were released long before on the Atari 400/800 and XE. Classics like Jumpman, Star Raiders, Koronis Rift, Alternate Reality, Archer Maclean's Dropzone etc etc.

Please don't fall into the trap of covering only the Speccy and C64. They were great machines, but along with the VIC-20 and the Amstrad CPC, the Atari was a damn popular machine and technically leaps ahead for its time. Cheers for that.

Paul Irvine, via email

RG: **Fear not Paul. I intend to focus on a different computer or console range in each issue, and have already spoken to a freelance writer about an Atari 8-bit special. It will be later in the year though, as I plan to cover a couple of 16-bit machines beforehand.**

More praise and grumble

I suppose I should start by saying well done for bringing this magazine to the shop shelves. I picked it up with great anticipation. Now that I have had time to look through it, I would like to offer some ideas and criticisms (constructive, I hope).

First thing that struck me was the wasted space. A lot of magazines do this, not just your own, but I would much less do without the needless graphics. The second fault I noticed (and this almost meant not buying the mag) was the coverdisc. When I looked at the back of the mag, every game and emulator was for a Microsoft system. I'm sure you are aware that many, many 80's kids are now Linux freaks (myself included). Surely you could have included some of the FREE Linux emulators. Is John Southern the same chap who edits Linux Magazine? Tut tut. Maybe you could devote a section of the disc to Linux fans?

So what do I like... The idea! The idea of a retro mag is great. I am predominantly a C64 fan so don't really follow the Nintendo/Sega scene, but I love the whole 70s / 80s thing. My favourite section by far is the advertising gallery. It's wonderful to see how these systems were marketed back then. More please! Well done with the Mastertronic article. That was excellent.

Some suggestions for future issues. More reviews of the arcade scene (Gorf, Pheonix, Galaxians, Dig Dug etc). Interviews with software houses e.g. Melbourne House, US Gold, Hewson Consultants, Alligata etc. Where are they now? Programmers of the 80s... Rob Hubbard, Andrew Braybrook, Archer Maclean, Tony Crowther etc. More hardware reviews and photos. Pictures of Oric Atmos, Tandy TRS80 with their associated hardware and available games.

A lot of my points here are idealistic, as far as I am concerned, but I hope that you will consider some of them. Many thanks.

John Watson, via email

RG: **Thanks for your comments. The issue one disc features emulators for Windows, but future discs will contain emulators for other platforms (maybe Linux). John Southern does edit Linux Magazine, but he only contributes copy to Retro Gamer. I'll be getting John to look at some of the more obscure computers you mention in future issues, so I hope there will always be something in each issue that will appeal.**

Personal views

Dear Retro Gamer. First and foremost, I think it's excellent that retro gaming has finally got a magazine available to buy at newsagents. Thankfully, retro gaming is on the rise – it's cost efficient and can give a great insight into the history of video games.

I think it's great that people want to keep alive that golden era, which would otherwise be lost, and I also believe emulation software is playing a big part. Therefore, it really was a great idea to present a cover disc of emulators with issue one. On the introduction it was nice to read the approach in which you gave some insight on how the magazine came to be published. It may even be worthwhile continuing that personal approach to other areas such as software explanation, using viewpoints that aren't generic and are personally nostalgic, which, in itself, will create enthusiastic pieces.

I thought that the Space Invaders cover was a good choice, but it was slightly spoiled by the fact that the screenshot wasn't the official Taito game. This sends out a message about the coverdisc before a buyer has even picked up the magazine, explaining in picture terms, that the content will be updated interpretations, rather than the classics you remember. The fact is, the Internet is riddled with thousands of them and the last thing a retro gamer seeks is a reworking of a classic (as good as some freeware versions are). I can understand your obstacle, if licensing and copyright present problems, but I think it would be better to avoid this kind of thing in the future and concentrate on resurrecting titles that were previously available to buy years ago, and are now freeware/public domain. Speaking of the cover disc, how about video game music that can be played on a CD player? Game music was an important aspect and may appeal to readers who do not now own old or new computers (like myself). I understand there's game music now available in different formats from original to orchestral variations and modern remixes using the latest technology.

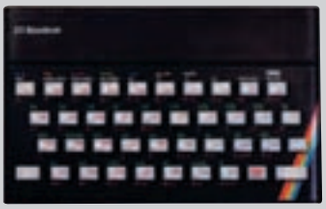
On the whole, I think the editorial content was well written and the features looked good, were laid out well and were of great interest. It's clear the topic has a team of people who are knowledgeable. My only criticism is that maybe the 100 pages could have been used more effectively. Double page spreads for contents and Top 100 Retro Games intro? 10 pages dedicated to 1983 advertising?

I wish your magazine every success and hope it makes any present day gamer interested enough to find out what they missed out on – as well as pleasing the old school types revisiting their gaming memories.

Darren Coulbeck, Grimsby

RG: Thank you for your views Darren. We are looking at alternative content for the coverdisc and this may include original non-PC games and retro music. Regarding the advertising gallery – many readers seem to particularly enjoy this section of the magazine so it's staying for now.

Friends abroad



Hello I'm in Portugal and I'm looking for a microcomputer ZX Spectrum 48K with rubber keys in good condition and boxed for programming. In Portugal I think there doesn't exist any machines in good condition. The main problem with the old machines is bad connectivity with the TV. I bought your magazine and I thought to write. Thanks for your help.

Carlos Rosa, via email

RG: Hi Carlos. I suggest you try searching eBay (www.ebay.co.uk) for your Spectrum. There are plenty for sale and many sellers will post items to Europe, although the postage charges will be a little higher.

Balancing act

Hi Martyn. I got Retro Gamer yesterday. As you say in your intro, it's been a long time coming. Which in hindsight isn't so bad really, because after reading through the magazine, it appears to have been worth the wait. I knew a regular retro mag would come along eventually, but I had concerns, not so much for its content, but for its overall style. It could have been written in a juvenile and misinformed manner, or on the other hand, it could have been pompous and self-important. Luckily, Retro Gamer is too sharp to fall into these traps. It's occasionally witty without being silly, and takes the subject seriously without being pretentious.

The Mastertronic piece by Anthony Guter gives some real insight into that time, as well as remind us that clueless cigar-chomping execs existed back then too. The top 100 multi-format list sprang some surprises, but it's a knowledgeable and sharp summary, clearly written by people that not only played these games, but lived them. Also authoritative is the Return Of The Rings article. From start to finish, Retro Gamer is a damn good read.

So what about negative points? I would also argue that the fake creases and scratches on the cover are a little too authentic – they certainly fooled me at first! I personally wouldn't use that effect on later issues. Your magazine is looking at the past, yes, but from today's perspective. To reflect this, I feel that the design and theme of the magazine should echo that period (which it does), but it shouldn't physically look old itself. The subject matter may be old, but Retro Gamer is most definitely new, and hopefully here to stay.

I'll need to get off the soapbox now because my feet are hurting like hell. To finish, I'll say two things. Firstly, the free CD is excellent, and the emulators section will be so useful to me in the future. Secondly, if I was someone that was passionate about these machines back in their day but had no idea that a retro scene existed now, and I came across Retro Gamer in a shop by chance, I would buy it. I really do think it can attract general gamers as well as committed retro fans.

I hope your team gets the success it deserves.

Gordon, via email

RG: Thank you for your encouraging comments. They've certainly spurred me on. Opinion on the 'old look' used on the cover is currently divided. One of the questions on the reader survey addresses this very issue, so we'll have to wait and see which way the results fall.

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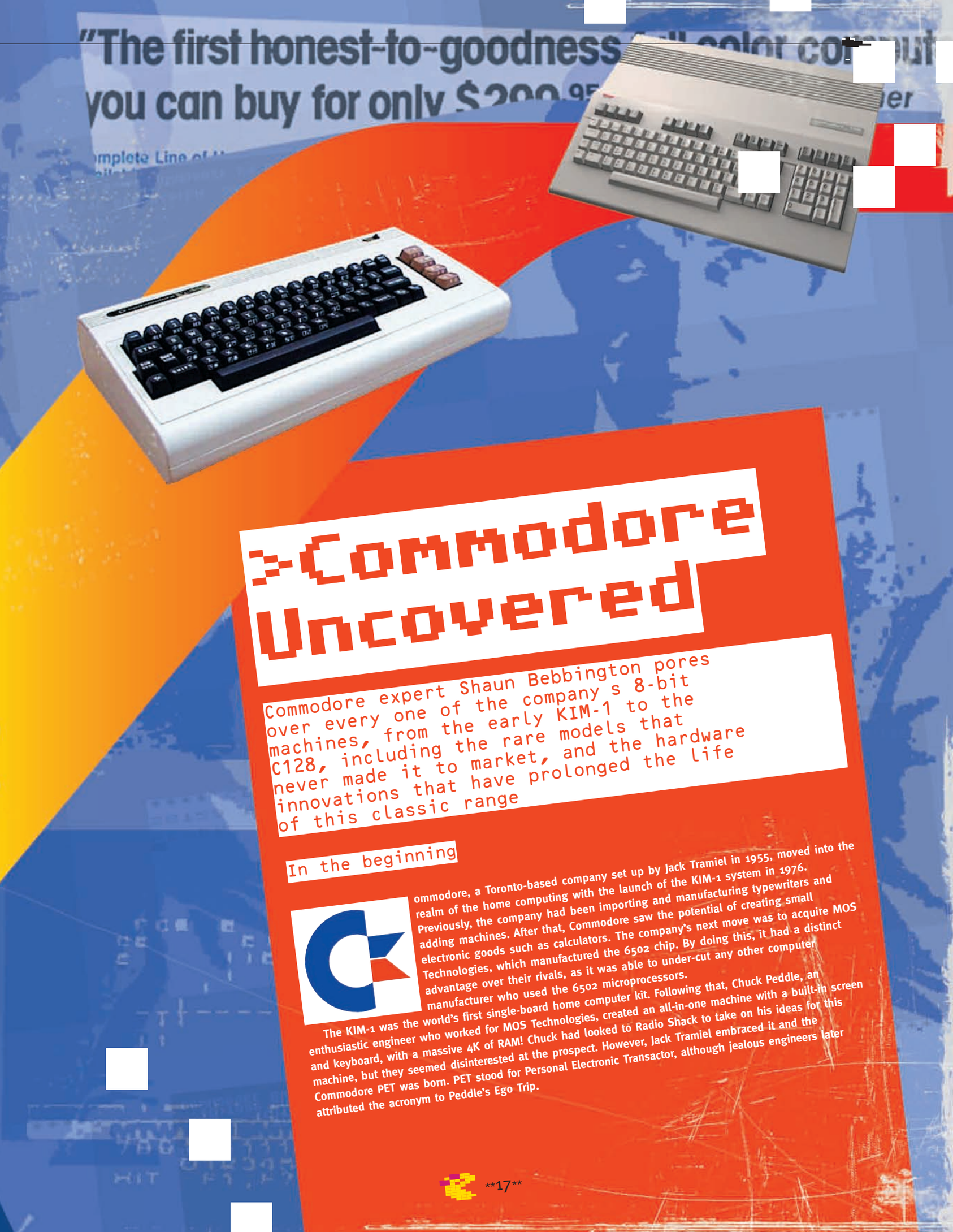


>Commodore Uncovered

Commodore expert Shaun Bebbington pores over every one of the company s 8-bit machines, from the early KIM-1 to the C128, including the rare models that never made it to market, and the hardware innovations that have prolonged the life of this classic range

In the beginning

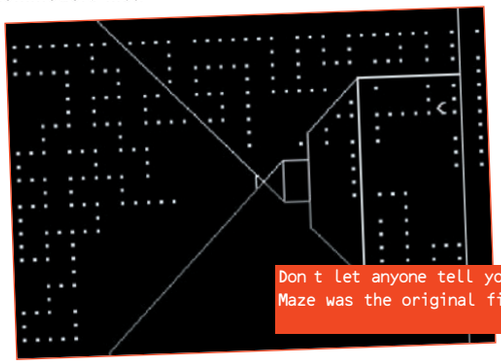
Commodore, a Toronto-based company set up by Jack Tramiel in 1955, moved into the realm of the home computing with the launch of the KIM-1 system in 1976. Previously, the company had been importing and manufacturing typewriters and adding machines. After that, Commodore saw the potential of creating small electronic goods such as calculators. The company's next move was to acquire MOS Technologies, which manufactured the 6502 chip. By doing this, it had a distinct advantage over their rivals, as it was able to under-cut any other computer manufacturer who used the 6502 microprocessors.

The KIM-1 was the world's first single-board home computer kit. Following that, Chuck Peddle, an enthusiastic engineer who worked for MOS Technologies, created an all-in-one machine with a built-in screen and keyboard, with a massive 4K of RAM! Chuck had looked to Radio Shack to take on his ideas for this machine, but they seemed disinterested at the prospect. However, Jack Tramiel embraced it and the Commodore PET was born. PET stood for Personal Electronic Transactor, although jealous engineers later attributed the acronym to Peddle's Ego Trip.

The PET (known as the CBM series in Europe) brought about new standards in computing. Firstly, there was PETSCII, which was an 8-bit ASCII-compatible character set, and not 7-bit that was the standard at the time. Secondly, at least for the first generation, the PET was fully self-contained, including CPU, memory, keyboard, screen and storage device, needing only a power source to use it – plug and play if you like. PETs were also cheap for the time, and required no great level of technical understanding unlike the kit computers. The graphical capabilities were somewhat limited though, as the PET had a set of pre-defined graphical symbols rather than user-definable graphics. Even with these limits, many games were written for it. Most notable is a fantastic version of Space Invaders, and a revolutionary program called Tunnel Vision.

Pet Space Invaders showed what could be done with the machine s pre-defined graphics

Tunnel Vision is the first example we can find of a first-person perspective game, dating back to 1978. Imagine how cool this was in its day! Although this program is simple and completely bare-bones by today's standards – you simply have to escape from a 3D maze – the concept itself lead to (and possibly inspired) the acclaimed 3D Monster Maze for the Sinclair ZX81, which is often thought of as the first ever game of its type for a home system. Although 3D Monster Maze did offer some enhancements, the basic concept was done on a Commodore first!



Don t let anyone tell you that 3D Monster Maze was the original first-person game!

Golden years

The VIC chip was created initially with third party developers in mind. However, Jack Tramiel liked what he saw, and he didn't see a graphics chip. Instead, he saw a complete computer system in front of him. The VIC-20 was realised, being both "A computer for the masses, and not the classes", with a low price tag, and "a real computer at the price of a toy", with a string of game releases. The VIC was officially Commodore's first real colour computer with user-definable graphics and sound capabilities, though there are rumours of a colour PET being prototyped around a year or two earlier than the VIC, known as the PET 4033.

Commodore had another success story, backed up by their own software and hardware, as well as good support from third-party developers. The VIC-20 didn't find it's way into the UK until around 1981, but this didn't stop people from buying it. At one point, there were 5,000 VIC-20s being manufactured a day just to keep up with demand. The machine's demise came when Commodore pulled the VIC from production. At the same time, the last generation of the Commodore PETs were on their way out.

Commodore's second generation of colour computer started out life in the latter part of 1981. Ever eager to keep up with market demands, Commodore's engineers had to come up with a machine that could compete with machines such as the Atari 400/800, at a price people could afford. This new machine featured the greatly improved VIC-II graphics chip and the dedicated SID sound chip. In January 1982, the company launched the Commodore 64 at less than half the price and with more memory than many of its competitors.

The C64 was marketed as a business machine, at least initially, and a cut down version named the Commodore MAX was to be aimed at the gaming market. The MAX, with around 2.5K of RAM and a membrane keyboard, was aimed again at the Japanese market after the success of the VIC-20, but it didn't last as the C64 was taking the world by storm. By now, Commodore was fast becoming a home brand. Clive Sinclair may have bought personal computers to the UK market, but on the world stage, Commodore was becoming increasingly dominant.

The Commodore Max - a cut down C64 that just couldn t cut it

Aiming the C64 at the business user rather than the gamer now seems to be a strange decision on Commodore's part. However, the gaming industry was still finding its feet, and it seemed that consoles and not home computers were the natural choice for gamers. This was slowly changing, as personal computers were now finding their way into many homes around the world, and with cheaper mass produced media (such as tapes and floppy disks), more and more were being used for recreational purposes. The C64, with 3 sound channels, 64K of RAM, hardware sprites, bit-mapping and user definable graphics, was the ideal machine for playing games.

Business mode

The Commodore 128 was set to supersede the C64, with a greatly enhanced BASIC, faster loading capabilities, an 80-column mode and a Z80 coprocessor. It was, as Commodore put it, three machines in one, with its own native modes, a C64 mode and CP/M compatibility. It even had dedicated video RAM that could be expanded to 64K, and the 128K main memory was internally upgradeable to 1Mb! However, expanding

>Gaming machines

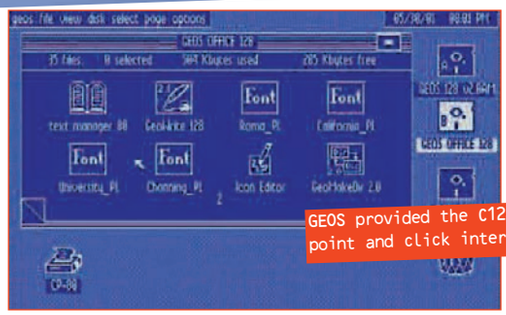
Commodore saw the growth of the home console, which was taking the world by storm. Crude "programmable" Pong machines had been popular with younger players, and the Atari VCS 2600 was one of the market leaders. Around the same time Commodore launched the KIM-1, it produced two Pong machines for the UK and European market. To keep up however, Commodore needed a machine to do two things – firstly, to compete in the increasingly competitive games market, and secondly, to keep up with the Japanese market, which was soon to be rife with Government subsidised products.

Commodore s earliest games consoles served up a simple bat and ball game

the C128 to 1Mb was extremely uncommon, only to be done by someone knowledgeable in hardware hacking. Even if accomplished, no programs made use of the extra RAM. 256K seemed a more viable option, as Commodore stated in the user guide.

However good this machine was, in practice many stayed with the C64, and those who did purchase a C128 only really made use of the C64 mode. Why? Well, by the time the machine launched, the great majority of software required none of the extra capabilities that this machine had to offer. Indeed, the C64 had become primarily a games machine, thanks to its colourful graphics and fantastic sound. Very few dedicated titles actually appeared for the C128, and many of the business applications specifically written for it also became available for the C64. The machine was still a relative success in comparison to many other 8-bit machines, though sales of the 64 dwarfed it.

With this new machine came a new disk format, the 1581, which allowed 790K to be stored on a 3.5" disk (theoretically up to 880K), as well as a series of RAM expansions allowing 128K, 256K or a massive 512K of additional memory. These new devices tended not to be used for games (can you imagine loading a 512K game from tape?), however a new graphical operating system was developed in America, known as GEOS (Graphical Environment Operating System). It was initially designed for the 64, and soon found its way onto the C128. GEOS eventually took full advantage of these new devices, and spawned a variety of third party RAM expansions.



GEOS provided the C128 with a powerful, point and click interface

The C128 itself evolved from its slim-line casing into a neat looking desktop machine named the C128D. This model sported a built-in 5.25" disk drive, a removable keyboard and carry handle. Such is the design of the C128D that it is often mistaken for a PC clone. Many C128D machines found their way to the growing GEOS community, as it took advantage of the 80 columns display, and was ideally suited to the small business or user group. The GEOS operating system had a growing number of useful applications available, and was bundled with a graphical word processor, paint package and spell checker on later versions. Other official software included a desktop publisher, a spreadsheet and its own dedicated BASIC. The weaker side of GEOS – printer quality output – was sorted out over time, and today you can print out high-quality, full

>Portable computing

Ask people to name the world's first portable colour computer, and what do you think they would say? Unbeknown to many, Commodore again offered another world first with the introduction of the SX-64. Although it weighed over 9 kilos (about 20lbs in old money), the machine was a success. The SX came with a built-in 5.25" disk drive, a 5" colour screen, removable keyboard and internal speaker. What added to the bulky design was the fact that the disk drive, as with many other Commodore devices, was intelligent. That is to say the drive itself had its own motherboard, processor, ROM and RAM. Commodore were one of the few manufacturers to use intelligent devices, offering potentially better performance but at a high price, although the 1541 drive was basically a cut down version of the 4040 CBM/PET drive.

As the SX-64 didn't have a tape port, and part of the ROM was used as a DOS wedge, some software (especially commercial software) refused to work with the system. That doesn't stop this machine being desirable and much-sort-after today. The design is admired by many as a classic, and allows you to, within reason, take your 64 wherever you like. As you already have a disk drive, monitor and keyboard, you only need a power point to use the beast. What more could you want?

colour images such as Encapsulated PostScript (EPS) and JPEGs thanks to the package Post-Print and a PostScript compatible printer.

Eight shades of black

As the VIC-20 neared the end of its life, Commodore needed a successor to compete with other low-cost micros that had emerged since the C64s launch, namely the Sinclair/Timex range of machines. The C16 was born, both as a replacement to the VIC and a new budget machine. The C16 came in a black casing, resembling both the VIC and C64, although originally it was to have its own unique casing. The machine's graphical resolution was similar to the 64's, and the machine had 2-channel sound, although from an inferior chip to the SID. It boasted a far greater colour palette and a slightly faster processor, but without hardware sprites it had the drawback of suffering from colour-clash in some cases.

The Plus/4 was developed at the same time, and was originally known as the C264. The machine was again in a black box, but its design was more like the intended C16 rather than the familiar bread-bin style. The Plus/4 featured a built in word processor, spread sheet and database, and also carried a full 64K of RAM, and an improved version of BASIC. Other than this, the compatibility with the C16 meant that it would see very little software written specifically for it, as happened with the C128.

The other part to this story was the C116. This particular model was originally going to be the C16, but for some reason Commodore changed its mind. The C116 found its way into Europe in very small numbers, and reportedly had an improved ROM compared with that of the common C16, whilst retaining a mere 16K of RAM. It was put into a casing similar to the Plus/4 and had a cost-saving "chiclet" keyboard as was used with the first PETs. You could see from this design that Commodore was aiming to topple Sinclair, or at the very least, remain a close competitor to Sinclair in the UK market.

The C116. A little black box complete with a cost-cutting keyboard. Sound familiar?

One thing that people did wonder about was why the C16, C116 and Plus/4 only had 121 colours when there should have been 128. The answer lies in the fact that if you have a base of 16 colours with eight shades of each, but the black is still only black no matter what shade it is. So you have a total of 120 colours and eight shades of black.

Revamped and repackaged

Commodore repackaged its most popular machines to squeeze more sales from the company's existing technology. The VIC-20 for a while was available as a VIC-21 or Super-Vic. This was simply a VIC with a 16K RAM pack bundled with it (5K plus 16K equalled 21K – hence the name). The C64 was put into many differing casings, including an educational machine, known as the PET 64, Educator 64 and 4064. The most well known version of this machine is in a PET casing with a built-in green screen.

With the Educator 64, Commodore clearly wanted to increase its share of the educational market

In fact, the C64 had several makeovers and revisions during its lifetime. The most well known of these was when Commodore cut the cost of manufacturing the C64 with the Commodore 64c (the c standing for "cost-reduced"). This was a new slim-line machine for the mid-80s. It now resembled something more like the original C128 in colour and basic design, and had some of the C128's attributes, with the new revision of the VIC-II chip. The lower price, and the hundreds of good games available at pocket money prices only increased the popularity of this machine.

One thing had changed though, and that was the new revision of the SID chip. The sample playback seemed much quieter than on the bread-bin C64s. To this day, people complain about this, but it can be fixed as programming tricks allow the SID inside the 64c to play samples as well as the old revisions of the chip.

The slimmer, sexier C64c attracted a new generation of Commodore converts

Although the 8-bit market was healthy with the C64 still selling strongly, as the 90s loomed Commodore looked to the future of the platform. Game consoles were back in fashion, and Commodore wanted to once again exploit this area of the market. What it came up with was a C64c in a new casing, with no keyboard and a slot for game cartridges. It was named the C64GS and retailed for £50 less than the C64c. It sounded great, except that the G64GS would not play hundreds of games from the C64 back catalogue. Even an impressive port of Shadow of the Beast and the launch of Commodore Format magazine didn't help the GS.

There is, however, a little known fact about this machine – you can use a disk drive with it. Not a standard Commodore drive (unless you are willing to turn it back to a C64c), but the non-standard and MS-DOS readable TIB 3.5" disk drive. That is, providing you are willing to write your own auto-exec file that allows you to choose the games available on the disk, and that the game chosen does not, at any time, require any keyboard inputs. One of the games on the disk given away free with the TIB drive, namely Fire Fly, works fine on a GS.

A C64GS with a TIB 3.5 disk drive. I bet you didn t know you could do that did you?

Third party improvements

Due to the popularity of GEOS for the C64 and C128 (although the operating system hadn't made a great impression in the UK), and the way the operating system worked, bigger storage devices were needed. One way was to use a RAM expansion unit as a temporary disk drive, which was fine until you next booted GEOS. The need to hold the data permanently in RAM was becoming a common one. The solution came from Performance Peripherals, a USA-based company, which offered a battery back-up upgrade for the geoRAM. This would only allow up to 2Mb though.

A genuine Commodore RAM Expansion Unit

Creative Micro Designs (CMD), another USA-based company, had already offered a DOS replacement since 1987, and had just finished work on a SCSI-based hard drive with a potential of up to 4Gb of storage space, Commodore drive emulation and GEOS compatibility. This device was imaginatively called the HD. CMD then began work on a solid-state RAM device for the C64 and C128, again aiming for

the same level of compatibility that its hard drive had. In 1991, CMD launched the RAMLink, which was a solid-state RAM drive expandable to 16Mb with its own independent power source and battery backup unit. This device was the fastest yet, and worked with both C64 and C128 modes. It was also possible to connect it to the HD via a parallel cable. It wasn't until 1992, though, that this device became GEOS compatible. When it did, the superior data-transfer speeds gave GEOS a new lease of life.

So let's think back 12 years or so, when most IBM PC-compatible machines chugged along with a typical 16Mb hard drive capacity and 4Mb of RAM. At this time, it was possible for a C64 or C128 to have 256 times the hard disk space and four times the amount of RAM! Granted, it would cost you a fair amount of your hard-earned cash, but it could have been done.

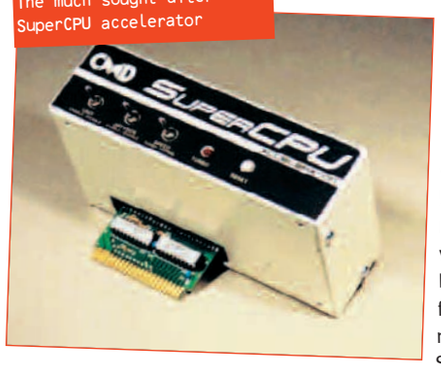
The RAMLink was called "revolutionary" at the time, and it s not hard to see why

Once the HD and RAMLink had been established, CMD needed a fast, high capacity removable storage solution that would also help capture the lower end of the market. The devices it came up with were the FD2000 and FD4000, able to use high-density disks at 1.6Mb and enhanced-density disks at 3.2Mb respectively. Both were also compatible with Commodore's own 1581 drive, and were able to detect what type of disk was in the drive, even if it was an MS-DOS disk. Programs such as the Big Blue Reader and recent GeoDOS were able to read/write MS-DOS disks, allowing for easy file sharing with your PC.

One important innovation for the Commodore 64 (and C128) was the accelerator card. Several versions exist, dating back to the late 80s/early 90s. They are the Turbo Master (NTSC only, 4.09Mhz), the Turbo Process (PAL, 4Mhz approximately), its successor the Flash8 (PAL/NTSC, 256k or 1Mb or on-board RAM, expandable to 8Mb, 8Mhz) and the SuperCPU (PAL/NTSC, 20Mhz, 1 to 16 Mb). Although the first three of these automatically boot up in C64 mode (on a C128), the latter is still available even today and will work under all of the Commodore 128's modes thanks to an internal upgrade.

The SuperCPU was the last product to be developed by CMD, and once again it pushed the C64 and C128 beyond their perceived limits, providing the user with speed, flexibility and compatibility. The Freescape games in particular, such as Driller, Dark Side and Total Eclipse actually became very playable and responsive. Other games have since been patched to work with the SuperCPU, such as R-Type, Last Ninja III, Stellar 7 and an updated and adapted version of Elite which is available from Ian Bell's website. The German-based software label Protovision is on the verge of releasing Metal Dust, which will be the first game to specifically require a SuperCPU and SuperRAM.

The much sought after SuperCPU accelerator



Many of the aforementioned accelerators give users a glimpse of what could have been if Commodore had continued to develop the C64 line. However, their evolution (through to the SuperCPU) has ensured the survival of the C64 and C128 beyond emulation. The most active users today are those who just can't live without upgrading their system, and are proud to own a C64 or C128 that can't be emulated.

Bringing the 64 back

The Commodore 64 is one of the most fondly remembered machines from what is now seen as a golden age of computing, and officially entered the Guinness Book of World Records as the best selling home computer ever, with around 30,000,000 units sold between 1982 and 1993. Because of its popularity, one or two companies have tried to exploit the name. When Escom purchased Commodore, rumours were rife of a re-launch of the 64, perhaps aimed at emerging home computer markets such as China. Nothing happened, and Escom too went bankrupt, which eventually split the 8-bit range from the Amiga.

In 1998, two years after Escom's bankruptcy, a press release sparked intrigue. A Belgium-based company was seemingly going to revive the C64 with a machine called the Web.It 64. This machine actually turned out to be a glorified 486 with Internet Explorer and a C64 emulator. It completely failed to amuse any Commodore enthusiasts for two main reasons. Firstly, many had a PC already, with Commodore emulators and access to the Internet, and secondly, there were a growing number of users who could access the Internet with a real C64 thanks to CMD. Also, as it had no real C64 compatibility, the machine is now considered to be nothing more than a joke, ending its short life gracing TV shopping channels.

The Web.It 64. A PC with an emulator. Great

Throughout the nineties, and up until mid-2001, the C64/C128 remained one of the only 8-bit platforms to have continued commercial support. The last surviving big name, CMD ceased all sales of Commodore-related items in June 2001. This was as much to do with an American recession and a general down turn in the IT industry as anything else. It was not the end though, as Click Here Software took over CMD's operations, and continued to develop high quality hardware and software.

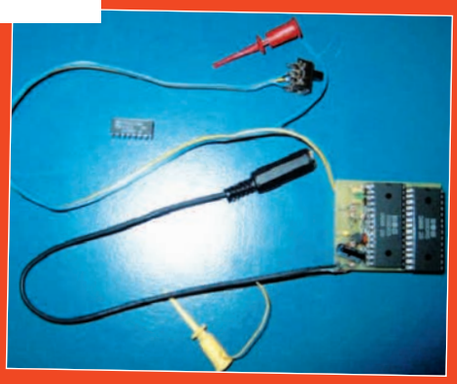
A year later, and another C64 remake was on the cards, although this one wasn't a commercial venture, more an enthusiast's attempt to put the machine onto a single chip. The enthusiast was Jeri Ellsworth, who, unlike Web Computers, did have the backing of the wider Commodore community. Jeri worked with ex-Commodore engineer Bil Herd, who had worked on the C128 and Plus/4, to sort out any potential compatibility problems. Jeri's prototypes were powered by the 65c816 processor used in the Turbo Process, Flash8 and SuperCPU. It soon became a hot topic, and the machine was demonstrated at many American shows. It soon became known as the CommodoreONE and today a version of it does exist, known as the C-1.

Jeri Ellsworth s CommodoreONE prototype board

The current owner of Commodore, Tulip Computers, licensed the C64 brand to Ironstone Partners in the summer of 2003. Ironstone is looking to develop the platform for entertainment, and has been working with Jeri Ellsworth on a new machine for the European and American market. The big difference between this and the Web.It 64 will be that the machine will have hardware and media compatibility as standard, as well as an enhanced graphics and sound chip.

>Mods and sods

Just as with cars, modding is one way of increasing your computer's performance by adding something unique. Occasionally, mods are just one-off productions by dedicated enthusiasts that end up at shows. Many mods though become finished products. For instance, the software label Protovision developed a four-player adapter for use with the C64 and C128. This device allows you to connect two extra joysticks to your machine, which would be pretty useless without any software support. With the launch of this device though, Protovision released Bomb Mania, a Bomberman clone that allows for up to four people to play simultaneously. This game has since become popular at many shows and retro events, and Protovision has developed a number of other titles for this neat device – Team Patrol, Hockey Mania and Snacks4Snakes to name but a few, with a four-player Pac-Man clone game in the pipeline.



If you are not content with just one SID sound chip on your system, there has been the opportunity to add another since the days of CMD and possibly before. Today, a project called the StereoINSid is currently in progress, and will be available as a finished product thanks to Protovision. And as Protovision will be selling this item, you can expect it to support it through games and other software.

It is also possible to add a SID to your C16 or Plus/4, using a DIY upgrade, and with enough interest it may become a finished, ready-to-buy product itself. Theoretically, it is also possible to connect a SID to your User Port, and as they work in a similar way on the CBM/PET, VIC-20 and C64, you could conceivably add a DIY SID card to any of those machines.

Commodores that weren t

Commodore had a whole host of machines that either didn't make it to full production, or were pulled early in their life.

The Commodore 500 series (not to be confused with the Amiga 500) was a machine with similar technology to the C64, with a variant on the 6502 processor similar to the C64's own 6510. The 500 used the VIC-II and SID chip, and had 128K to boot. It was also more expandable than the C64, with a coprocessor option, and retailed at £395. For another £200, you could get the 700 series, which had an 80-column mode, 128K or 256K of RAM as standard and a built-in adjustable screen. The 700 series was Commodore's business machine, the 500 was a scientific/personal computer, and the C64 was the personal computer. Presumably then, the VIC-20 was considered as the starter computer. It would be very interesting to see how easy it might have been to port games (and other software) from the 64 to the 500, as they were theoretically compatible. Commodore stated in the 500 manual that it intended to port over much of the C64's software library to this machine, but as it was shelved early in its life, we'll never know what might have been!

Commodore also planned to extend the 'Executive' range of machines with a deluxe version of the SX-64 – the DX-64, which was essentially the same machine but with an extra drive. The SX-100 was another version pre-dating the SX-64, but with a black and white 5" screen rather than colour. In the end, only the SX-64 made it to the market, although working prototypes of the other machines are known to exist. The SX casing was also used to create a portable Amiga 500, known as the SX-500. Only two of these machines are thought to exist.

The Commodore LCD was another machine that never made it. Aimed at the 'Executive' market, it had mix of technology, using the same graphics chip that appeared in the C128, with a C64-compatible cartridge port, an integrated software package and BASIC similar to that featured on the Plus/4. The LCD was to have a base of 32K battery-backed up RAM, expandable to 128K. This was planned to be Commodore's first truly portable personal computer, weighing in at a mere 2.3kilos (around 5lbs).

Many prototypes existed around the TED (Text Editing Device) technology, the graphics chip used in the C16, C116 and Plus/4. The one that generated a lot of interest is the C364, which was a 'speaking' computer. Only a few prototypes exist around the world, and so very little is known about the machine. Luckily, one has found its way into Bo Zimmerman's collection, and he is a true Commodore enthusiast. His site states the C364 was intended to pick up where the C64 left off. He feels that Commodore shelved the release of this machine in fear that it would have too many computers aimed at the same market. We can imagine that it would have been confusing. As only certain machines were compatible with each other, which machine would you buy from Commodore's range?

One of Commodore s missing links - the Commodore 232

At least three C364s are known to have been produced, with only one built to consumer quality.

The Commodore 232 was another part of the TED family, which was a revision of the Plus/4, with 32K of RAM, internally expandable to 64K. Again, Commodore probably shelved this machine in fear of crowding the market.

If you're looking for a cheap Commodore storage device, the 64HHD package allows you to use any old PC with MS-DOS as a hard drive, and even better, it works with the VIC-20, C64, C128, C16 and Plus/4. One storage device for your entire collection of Commodore machines – no more need to endlessly search for your favourite disk, and faster loading times than the old 1541 drives.

Another way to provide a cheap hard drive to your C64 or C128 (in C64 mode) is to use the IDE-64 cartridge. This device allows you to use any size IDE or E-IDE hard disk up to 8Gb, and also allows for one other device such as a CD-ROM drive. The IDE-64 is the fastest device for an unexpanded system, and plugs straight into your expansion port. It also adds capabilities such as playing music CDs and includes an easy to use file manager.

Some of the more outlandish mods include a C128D with internal 1581 drive, a C64 with a 32-bit processor (although this is work in progress, it still looks good!), and a C64GS with a SuperCPU, RAMLink and USB keyboard. Many others exist, and one even made the news in many computer publications. In 2002, Adam Dunkles turned his C64 into an Internet server with his custom-built Ethernet adapter. He was able to stream live audio from his machine to the Web. Even more impressive was that he was only using a basic 1Mhz system. Adam has also developed his own operating system, named Contiki, which turns your C64 into a Web browser! Contiki has since been ported to many platforms, from the Tandy CoCo to the Atari Jaguar.

>The Commodore 65?

Even after the failure of the C64GS, Commodore still looked to develop the C64 beyond what had already been done with the C128. Its plan was for a 16-bit machine that would fall somewhere between the C64 and Amiga, using 3.5" disks (compatible with the 1581) and including support for the 64's extensive software library. At the time, Commodore was struggling, with exception of the UK and German market, and this machine might just have seen it through as its traditional customers were not choosing to upgrade to the Amiga platform in their droves. The machine that it was working on was the Commodore 65, which had something like a 75-80% compatibility with the C64, improved BASIC and a new VIC and SID chip.

The eventual cancellation of the C65, coupled with general mismanagement, led to Commodore declaring bankruptcy. A short time later it emerged that the C65 did indeed exist, in prototype form at least. Many have found their way into private collections. A survey was conducted a few years ago, asking owners to submit the serial number of their machine. The highest number was in the 190s, so it seems that less than 200 prototypes were made and exist today. A great shame!

>Machine specs

Commodore PET/CBM 2000, 3000 and 4000 series

Launch price:	$495 for 4K RAM or $795 for 8K RAM, starting at around £500 when launched in the UK
Processor:	6502 at 1Mhz
RAM:	4K on earlier revisions and up to 32K
ROM:	16K
Sound:	White-Noise generator via user port
Graphics:	40 x 25 character resolution. Pre-defined character graphics. A Pic-Chip was available later in the PETs life, giving it a quarter-block resolution of up to 80 x 50
Notes:	Early versions of the CBM/PET machines had a black and white screen. Later a green-screen was introduced. Screens were either 9" or 12"

Commodore PET/CBM 8000 series and SuperPET

Processor:	6502 at 1Mhz, 6809 coprocessor for SuperPET at 1Mhz. Upgrade option for earlier 8000 machines.
RAM:	32K up to 96K
ROM:	16K
Sound:	Later revisions had a built-in speaker.

Graphics:	80 x 25 character matrix. Pre-defined character graphics
Notes:	As with earlier revisions of the PET, the built-in screen ranged from 9" to 12". Green-screen was a standard, and later revisions had rounded and more stylish casings

Commodore VIC-20

Processor:	6502 at 1.0227 Mhz (USA) or 0.973 Mhz (Europe)
Launch price:	69,800 Yen (Japan), $299.95 (USA), around £200 (UK)
RAM:	5K potentially up to around 37K, although common RAM packs provided either 3K, 8K or 16K. Late in the Vic-20's life, a 32K RAM pack was introduced
ROM:	16K, similar to the PETs
Sound:	3 channel generated from the VIC chip
Graphics:	Original VIC chip. 22 x 23 pre-set character matrix, which can be changed up to 31 x 25, although some characters will be off the screen. 16 colours in total, 8 foreground and 16 background allowing 256 colour combinations. High resolution display at 192 x 200 and 96 x 200 low resolution maximum. Again, pixels will be hidden off the screen
Notes:	Officially Commodore's first colour computer, aimed as an entry level personal computer

Commodore 64

Processor:	6510 at 1.0225Mhz (USA) and 0.985Mhz (Europe) Launch price: $595 (USA), £299 excluding VAT (UK)
RAM:	64K RAM system, meaning that any area of memory, with exception of the first two bytes of the zero page could be RAM
ROM:	20K
Sound:	SID chip. 3 channel sound. The SID is probably the best known feature of the 64
Graphics:	VIC-II chip. 40 x 25 character matrix, 320 x 200 high resolution, 160 x 200 low resolution, 16 colours, 8 hardware sprites. Bugs in the VIC-II chip allow the borders to be open on the C64, meaning you can create a wide-screen or tall-screen effect. It is also possible to open the border in all directions. This allows for a greater resolution by using still sprites in the borders. It is also possible to display more than 8 sprites on one screen
Notes:	This is Commodore's and the world's best selling 8-bit home computer. The 64 came in many guises, but, with exception of the Commodore MAX, they were all basically the same machine. The original C64 and the later C64c are the best known machines

Commodore 128, 128D, 128Dcr

Processor:	8502 at 1.0225 or 2.044Mhz (USA), 0.985 or 1.97Mhz approximately (Europe), Zilog Z80 at 4Mhz approximately
Launch price:	Around £349
RAM:	128K RAM (2 banks of 64K), with 16K Video RAM initially, and 64K on later models. This extra memory can be used as a temporary RAM disk as long as you are not using 80- column display
ROM:	48K
Sound:	SID chip. 3 channel sound. Later revisions used the C64c SID chip
Graphics:	VIC-II and VDC 8563. The VIC-II provided all of the graphical functions of the C64, including the bugs. The VDC chip allowed an 80-column display via the RGB port, which allowed 640 x 200 high resolution or 640 x 400 interlaced display with 16 colours
Notes:	The C128 is much sought after by those who like to upgrade their system, as it has a better tolerance of devices such as the SuperCPU and RAMLink

Commodore C16/C116

Processor:	7501 at 0.89 Mhz or 1.76 Mhz
Launch price :	Around £140 (from June 1984)
RAM:	16K expandable to 64K
ROM:	16K and either 16K or 32K on the C116
Sound:	2 channel sound from TED chip
Graphics:	TED chip. 40 x 25 character matrix. Various resolutions up to 320 x 200 high resolution. Allows up to 121 colours. Similar display to the C64
Notes:	This was Commodore's replacement to the Vic 20, as an entry level computer. With just 16K of RAM, it is remarkable that this machine survived

Commodore Plus/4

Processor:	7501 at 0.89 Mhz or 1.76 Mhz.
launch price:	Around £300 (October 1984)
RAM:	64K
ROM:	32K to 64K. Built in word processor, database and spreadsheet program
Sound:	2 channel sound from TED chip
Graphics:	TED chip. Graphical capabilities are same as the C16 and C116
Notes:	Some say that this was intended as Commodore's replacement to the C64, however lacking hardware sprites and with poorer sound capabilities, the Plus/4 would never take the 64's crown. Other intended machines in this range included the C232 and C364. The latter would have speech capabilities, but both were shelved. The Plus/4 was a modest success, even with a little dedicated software base

>Commodore Web Resources

Commodore PET

Ken Ross's home page
http://members.tripod.com/~petlibrary

Larry's PET archives
www.portcommodore.com

VIC-20

Carlsson's VIC-20 demo page
www.mds.mdh.se/~dal95acn/vic20.html

CNCD
www.cncd.fi/aeeben

Commodore 64 and 128

Protovision
www.protovision-online.de

Commodore Scene magazine and importing service
www.commodorescene.org.uk

Covert BitOps
www.covertbitops.c64.org

DE-64
http://come.to/ide64

C64 and related news page
http://www.c64.sk

CMDR Key and Click Here Software
www.cmdrkey.com

64HDD project
www.64hdd.com/index_en.html

C16 and Plus/4

The Commodore Plus/4 Resource
www.plus4.org

Commodore Plus/4 World
http://plus4.emucamp.com

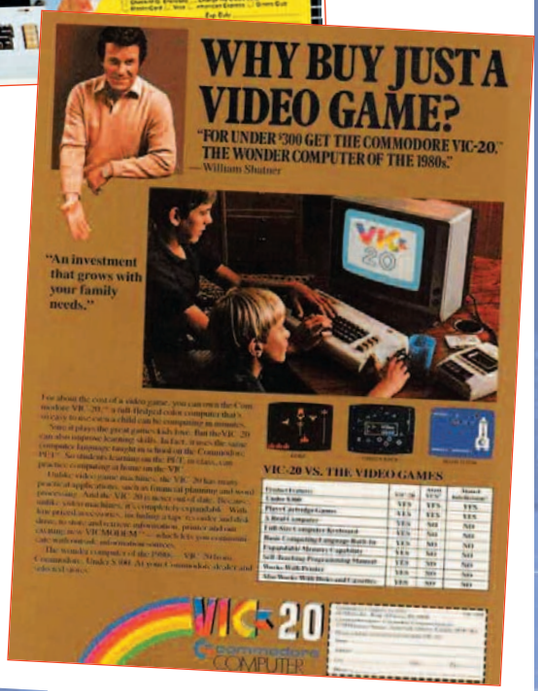
Xeo3 game
www.xeo3.com

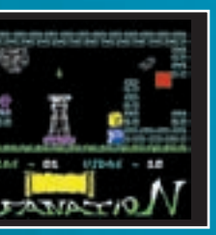
With thanks to Allan Bairstow, Robert Bernardo and Bo Zimmerman.

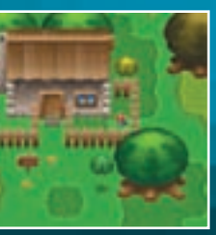
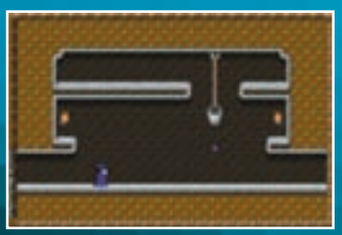
>And Then Came William

Commodore was not only a great manufacturer and designer of computers, but also probably the best in its field when it came to marketing products. The bosses at Commodore knew that the company needed a bona fide celebrity to endorse its high-tech products, so who did they look to to convince the public-at-large that their machine was "The first honest-to-goodness full colour computer"? - Mr William Shatner, who else? Congratulations Commodore, we salute you... RG*

Order Direct! Commodore VIC-20...The Friendly Computer.
"The first honest-to-goodness full color computer you can buy for only $299.95" – William Shatner
Contemporary Marketing, Inc.
VIC 20
THE FRIENDLY COMPUTER
commodore


WHY BUY JUST A VIDEO GAME?
"FOR UNDER $300 GET THE COMMODORE VIC-20. THE WONDER COMPUTER OF THE 1980s."
—William Shatner
"An investment that grows with your family needs."
VIC-20 VS. THE VIDEO GAMES
VIC 20



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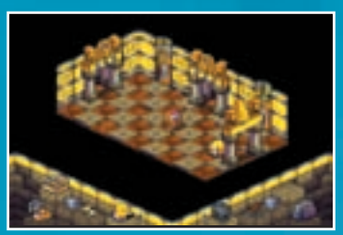
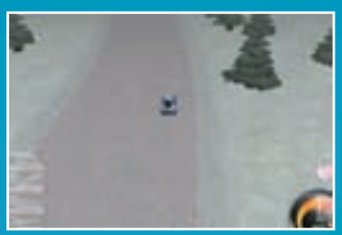
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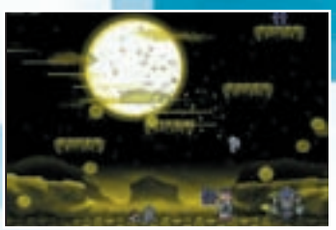
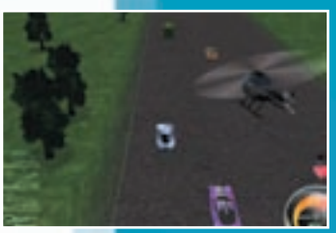
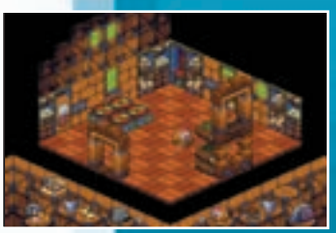
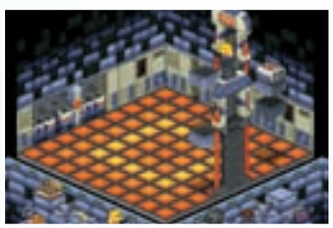








Retro Remakes

The bedroom programmers are well and truly back, and they're updating classic games for the PC. Martyn Carroll talks to members of Retrospec and Ovine By Design, two of the most respected development teams in the remaking community

Retrospec

Retrospec (**http://retrospec.sgn.net**) are a team of coders, graphic artists and musicians who have gathered together to remake classic 8-bit games. In 2003 they released seven games, including a superb PC update of Head Over Heels that has set new standards for retro remakes. I asked Graham Goring, veteran of many Retrospec remakes (including Head Over Heels), to answer a few questions.

RG: Retrospec recently celebrated its fifth birthday. How did it all begin?

Graham: It all came about from discussion in a lovely place called comp.sys.sinclair, a discussion group about all things ZX Spectrum related which exists in the ASCII realms of USENET. I'd describe the place with more accuracy but I really want to see the pedants who live there bite at that description.

Anyhow, a number of people were all chatting away about the idea of forming a programming group who'd remake old games. Richard Jordan was already writing Klass Of 99 at the time, Jeff Braine (who pitched the idea of a team originally) was hankering to do Sabrewulf (and still is, bless him), John Dow was chomping at the bit to produce at least one Ultimate remake a week, Andy Noble already had a pair of remakes waiting in the wings and I wanted to do graphics for everyone. It just made sense to combine our efforts and form a group, which Richard Jordan christened Retrospec. There were probably some other people involved, but they ain't around any more so sod 'em.

RG: Please describe the development of a typical remake. Do you meet up and work together or collaborate by remote means?

Graham: Well, it seems odd that we formed this collective because often people just do things off their own bat at first, and then later on one of the pixel-pushers might get called in to help out. I don't think that any of our number have actually met up aside from myself and John Blythe (and even then it was for like an hour), because we're from all over the world. But we have a central mailing list which we all use to discuss what we're working on, often deriding each other's choices of games or cooing appreciatively at the demo versions of them.

So it's all done by remote. Tomaz Kac wrote most of Head Over Heels before I'd even put pixel to paper. He then spent the rest of the project diligently building rooms and debugging the game whilst nagging me for graphics every Monday via the Internet.

RG: What is the appeal of remaking classic games?

Graham: I think it's a little different for each member, but for me it's just an extension of my love for the original game. When I remake a game it's because I want to see it with more colour and higher resolution graphics, as well as tinker with it to see if I can improve it by removing some of the unfair elements of the original or adding extra features and levels. There's also the fact that if you do a good job you get sent nice emails by people who were fans of the original.

Not that you can please everyone, though. There will always be some ungrateful little gobshite who can't get it to run at full speed because of their archaic rig or an insistence on running an incompatible operating system (because they hate Bill Gates and blah-de-blah-de-yawn) and who will proceed to denounce you as a tool of the devil for not catering to their every stupid whim.

Sorry to go off on a rant here, but you also get toady little weasels who'll think that you owe them the game THIS VERY MINUTE and who are apparently under the impression that we do this as a service to the taxpayer. Grrr!

RG: Is it purely a hobby, or do you ultimately aim to create commercial titles?

Graham: Well I work on commercial games for a living so I couldn't make money out of this even if I wanted to – it'd be a contractual no-no. But personally I'd avoid making remakes for money just because of all the legal problems which would arise from a money-making venture. The copyrights on a lot of these old games indirectly belong to big companies. And even if a mobile game company did secure the rights I reckon that the original authors would get nothing out of it and that just doesn't sit right with me.

However, there are some of our number who aren't adverse to making games which are homages to other games for money and I don't begrudge them that one iota. As long as you aren't ripping anyone off wholesale, I think it's okay to use elements of gameplay in newer games.

RG: Have you run into any legal problems when remaking games?

Graham: Haha! This is one I should really turn over to a particular Retrospec member as their game is now defunct due to contractual wranglings. I'll not mention their name in case we have a salvo of lawyers fired at us, but anyone who follows the remake scene will know who I'm talking about.

You see, one of the things which is really nice to do when you're making a remake is to get the blessing of the original author. Many of the people whose games we've remade have been absolutely cracking about it. In fact I'd say that when you're dealing with the original authors of the games (as opposed to the publishers and legal copyright holders) they are wonderful without exception.

But obviously they can only give you their personal blessing as they generally don't have the copyright any more, so on occasions some members of Retrospec have taken it upon themselves to contact the people who can really say yes or no – the proverbial Men from Del Monte. Some of the companies contacted have taken a "don't ask, don't tell" policy like the US Military does with sexuality. As long as we don't specifically ask them if we can remake a game, they won't specifically crush us under their mighty heels.

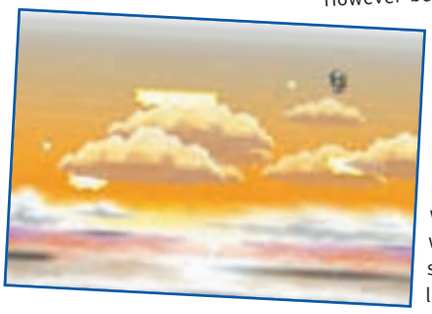
But one company that was contacted started getting all legal and insisting on many unreasonable things, saying that because their game was so unique that you couldn't make anything like it without obviously programming things in a manner which would breach their copyright. So you take the rough with the smooth, really. There are certain companies whose games you simply don't even bother trying to remake because their stance is well known. And we also steer clear of explicit arcade or film licensed games because it's just

another layer of legal problems which might get us shut down by the IDSA.

Sadly this stops us remaking some really cracking titles, but at the end of the day they aren't our games so we have to respect the wishes of the copyright holders.

RG: How is Retrospec funded?

Graham: It has to be said that we have a guardian angel when it comes to Web hosting in the shape of Adil Demiri who runs SGN.Net, a Slovenian ISP. He lets us get away with murder when it comes to bandwidth usage (Head Over Heels and Highway Pursuit have generated terabytes of downloads on their own!) and doesn't charge us a penny. Truly let us venerate the name of Adil Demiri!



However before Tomaz Kac's chum gave us space, we used to be on the servers of John Dow's company, Dow Carter. So basically we're lucky swines. Generally there's always someone in the group who knows someone else who'll happily let us squat on their servers like a pixel-packed parasite.

RG: What tools do you use to create games?

Graham: I use Paint Shop Pro 5 (which is the best £92 I've ever spent) for drawing my graphics and up until recently Blitz BASIC 2D for programming my games. Blitz BASIC is a PC version of the popular homebrewing language from the Amiga, only now it's far more powerful and even comes in a lovely 3D variant which allows people to make games which look all shiny and professional. I'd say that if you want to remake a game and have some basic programming knowledge that Blitz is one of the best ways to go.

Nowadays I've moved over to using Allegro, a superb game specific programming library for C/C++. Unlike Blitz, Allegro is completely free but obviously involves getting a compiler from somewhere and setting it all up. The results aren't as immediate as Blitz, but you'll write better code in the long run. Most of the other programmers in Retrospec also use Allegro and C/C++, but some use Delphi, Visual BASIC, Blitz or even DirectX. Remaking can be done at any level, really. You don't have to know how to code in order to create a playable and faithful remake of a game.

RG: With Head Over Heels, was there always a feeling you were working on something special?

Graham: Head Over Heels is one of those games which has always been fondly remembered and held up as a supreme example of 8-bit gaming. Many people I know cite it as the single best game on the Spectrum and so I don't think we ever had the option of making a lacklustre version of it. If we had, I'm sure we'd have been strapped into the nearest wicker men and barbecued.

Given the amount of effort that went into it from everyone – the programmer, the musician, the testers and myself – I'd have been disappointed if it wasn't warmly welcomed. Me and Tomaz in particular spent over a year making it, and so as it grew and grew in terms of polish and content, we had a good idea that it was probably the biggest remake we'd done. Our previous games have only warranted a mention on a few Retro specific Web sites, so I'm kind of surprised by the amount of magazine coverdiscs and Web sites that Head Over Heels has appeared on.

I think the nicest feedback we've had on Head Over Heels was from Jon Ritman himself (the original author), because although we stuffed up a few of his puzzles in the process of conversion, he was really supportive about it.

RG: What's your most popular download to date?

Graham: I think it's Highway Pursuit, which is a 3D game where you drive through numerous environments trying to survive the onslaught of enemy vehicles and not slamming into the roadside. If you think that sounds familiar then you're completely wrong! It's not based on anything at all! And we'll punch anyone who says otherwise! There, that sounds legally bullet proof.

So far I think there have been about 70,000 downloads of it, although that's only from our site and not including mirrors which other freeware gaming sites may have set up.

RG: Can people join/help Retrospec?

Graham: Absolutely! We're always on the lookout for talented artists or musicians. We have loads of coders but not really enough people to do the graphics and sound side of things. However we should point out that you have to be in it for the long-haul, as it's all very well just drawing Monty or Horace in 16 colours, but it's doing everything else in the game to boot that separates the remakers from the dabblers.

RG: Do you think the glory days of the bedroom programmer will ever return?

Graham: We've had a bit of a resurgence in the last few years due to game-making packages like DIV, Blitz, Dark BASIC and Multimedia Fusion arriving. Before, working on the PC meant really getting your hands dirty and using C/C++ if you wanted to produce anything worthwhile looking. I don't think you're ever going to see homebrewers competing with the likes of Electronic Arts, but certainly there's a wealth of quality independently made software on the Web. A lot of it is just stuff which puts a minor spin on whatever puzzle game is the soup de jour, but there are some really amazing products being made right now.

I don't think that you'll ever really get rid of the bedroom coders. At least not without some kind of very powerful pesticide...

Upcoming Retrospec games

The following games are all currently in production at Retrospec. Check their Web site (http://retrospec.sgn.net) to see how theyíre coming along.

Jetpac - Solar Crisis

This remake is being done by Richard Jordan with graphics by John Blythe and will probably be the next one that'll appear on the Web site. The core gameplay is based on the old Ultimate game, however it's been enhanced with the inclusion of bonuses, bigger boss-type aliens and unique features on each and every one of its nine levels.

Jetpac - Crash & Burn

This will follow on some time later as Neil Walker uses all the same graphics but makes a decidedly different take on Jetpac than Richard Jordan. Might even have a reasonable amount of levels...

I, Ball 2

Dan Condon-Jones is working on this one with graphics (eventually) by me. It's a single-screen platformer from the Spectrum which was originally by Timothy Closs (a lovely chap himself). You have to bounce around and kill some things and pick up other things. It has cracking level design and is being done in Blitz BASIC.

Sweevo s World

Ignacio Perez is currently remaking this along with Ric Lumb, who's doing the graphics. It's a cracking isometric adventure where you have to tidy up a strange world filled with bizarre enemies who want to kill you by either dropping weights on your head, poking you up the bottom or having you chased down by a fascist monster.

Humphrey

This is a highly renowned (in Spain at least) game which the ever busy Ignacio Perez is writing. It involves an alien movie star being chased by hundreds of mad fans while painting his new mansion.

Pengo

Okay, so this is really an arcade conversion but it's changed a fair bit from Ignacio Perez's version which is in isometric 3D.

Abu Simbel Profanation

Programming is complete in this unfeasibly hard platformer in the mould of Jet Set Willy (only with an increased likelihood that you're going to kick your monitor in while playing it), and now it's just waiting on graphics from me. Aw, hell...

Exolon DX

Classic horizontal flip-screen platform shooter originally from Raffaele Cecco and now being updated by Russell Hoy with graphics by John Blythe.

Saboteur Returns

Once Tomaz's dalliances away from Retrospec are sated he'll be back to remake this stealthy platformer with spooky lighting and all sorts of whizz-bangery. At last you'll be able to karate-chop dogs again without your mum yelling at you.

Trashman Millenium

Classic action as you struggle to empty all the bins in a neighbourhood filled with dangerous dogs, fussy house-owners and people who apparently drive with their eyes closed.

Sabrewulf

Jeff Braine's release of this game has been gestating longer than most elephants, but rest assured it looks lovely and will feature all the old-school mazery that we know and love.

The Valley and the Twin Kingdoms

Based on the old 8-bit text adventure Twin Kingdom Valley, John Blythe is transferring its puzzles and world descriptions into a Zelda-style 2D action RPG adventure game. It's hopefully due sometime this year – fingers crossed.

Ovine by Design

Ovine by Design (**http://ovine.net**) is made up of two game developers – Andy Hewitt and Stu Collier. Their remakes include Jetman, Sacred Armour of Antriad and, their latest, Imogen. I spoke to Andy about their game-creating hobby.

RG: What's the story behind Ovine by Design? How did you and Stu meet get together?

Andy: We met up while at a computer club when the Atari and Amiga were in their prime. While others were playing games we were making our own. Stu had a 386 so he made a few PC games and I made some on the Atari and Amiga. We used Deluxe Paint and Assembler and made remakes of Atic Atac, Jetpac and Boulderdash, as well as various half completed projects. So I guess we were creating retro remakes but it wasn't so retro back then.

About two and a half years ago we met back up in Anarchy-Online, a MMORPG that sapped days away from our lives. One day I think we came to the realisation that we had nothing more than these highly developed characters to show for it. Although we had had fun playing this game, we decided we needed to do something a little more constructive, so we got back into making games and of course retro was the hot favourite.

RG: How do you go about creating a remake?

Andy: I guess it works in the same way most projects run. Typically we would grab as much as we can from the original game to get an idea of structure and how to plan out our remake. Sometimes Stu will also hack in to the original game and put in some cheats so we can explore further.

Once we know how we are going to tackle the remake, and decide how we are going to translate it to a modern PC, we'll split the work up. Usually I'd work on graphics first while Stu gets down to the essential game engine, but we're both pretty flexible and we end up doing a bit of everything.

The hard part is driving through the 90% completion barrier. It always seems much harder to get the last 10% done, but when you do it it's very satisfying. The important thing throughout is to enjoy the process, so we've never put pressure on each other and as such we never impose any deadlines. Generally it gets done when it's done, but working together we keep ourselves motivated so we tend to get all of our games completed in the end.

RG: What draws you to remakes?

Andy: Quickness and satisfaction. Like most hobby coders, it's easy to start a game but harder to finish it. With remakes you see your goal from day one.

Updating the graphics and gameplay is also very appealing. There are lots of good ideas in the old games and usually lots of room for improvement.

RG: Do you one day hope to develop a commercial remake?

Andy: It is a hobby, and a way of reliving our past enjoyment of some of our favourite games all over again. I guess commercial titles are a possibility, with interest in retro games rekindled on mobile phones and handhelds, so you never know. For now we are more than happy if we get just an email from someone who downloaded and enjoyed a game we made.

RG: How do you pay for your bandwidth?

Andy: It's funny you should say that, as we're just in the process of moving hosts to help reduce costs of ever growing bandwidth! When we first starting putting up our games, we'd get maybe a hundred downloaded each month. These days we get more than that a day. If it ever gets out of control maybe we will have to rethink it, but for now we are happy to split the costs between us.

RG: What development tools do you use?

Andy: For development we primarily use Jamagic (**www.clickteam.com**). It's not as well known as some of the development tools out there, but the language is really powerful with OOP (Object Oriented Programming) and a vast array of commands that are just perfect for modern retro games. We also use Multimedia Fusion as you can create a good game in half the time you can via programming. For graphics it's Photoshop and for 3D work we use AC3D.

RG: Tell us about Imogen, your latest game. Many people may not remember the original.

Andy: It was originally written by Michael St Aubyn back in 1986 for the BBC Micro. It's devilish charms tend to stick in your memory and we just had to have a go at remaking this one.

The story goes like this. You are this wizard who has been imprisoned in a series of caves, each containing a puzzle to solve, usually in a sinister cartoon-like fashion. To help you complete each puzzle, the wizard can transform into a cat for jumping and a monkey for climbing. It's a very laid back game, but a lot of fun. There's no rush to complete it, but to get through to the end you have to find the best way to solve each puzzle using the least number of transformations. It really is a game you can just pick up and play, and if you feel determined it will keep you busy for several hours. We're really happy with it.

And honestly, no hamsters, dogs or jelly babies were harmed during the making of the game. It's all special effects!

RG: What about CHOLO, which is currently in development?

Andy: This is another favourite game of ours. CHOLO is set in the near future where radiation has forced the inhabitants of the world to live in deep underground bunkers. You take control of topside robots that beam their camera signals back to your terminal. Your ultimate goal is to free the inhabitants by taking control of various robots each with their own abilities.

It was originally developed by Solid Image in state of the art (at the time) 3D wireframe. We've now got the opportunity to give it a modern treatment. There's a lot of room for expansion in the game and this is what appeals to us the most. If you visit our Web site you will see some early screenshots showing a definite style that we feel complements the game well. Sort of like a cross between TRON and Max Headroom.

RG: What other titles do you have lined up for the remake treatment?

Andy: We are always open to suggestions and receive requests every now and then. But generally any of our favourite 8-bit games is a contender. We have a version of Arcadia which should be out soon. Beyond that we'd love to do an Elite-like game but have no specific plans at the moment.

RG: Which is your most popular game?

Andy: Imogen is by far our most popular download, but second to that Sacred Armour of Antiriad has always had steady and strong downloads.

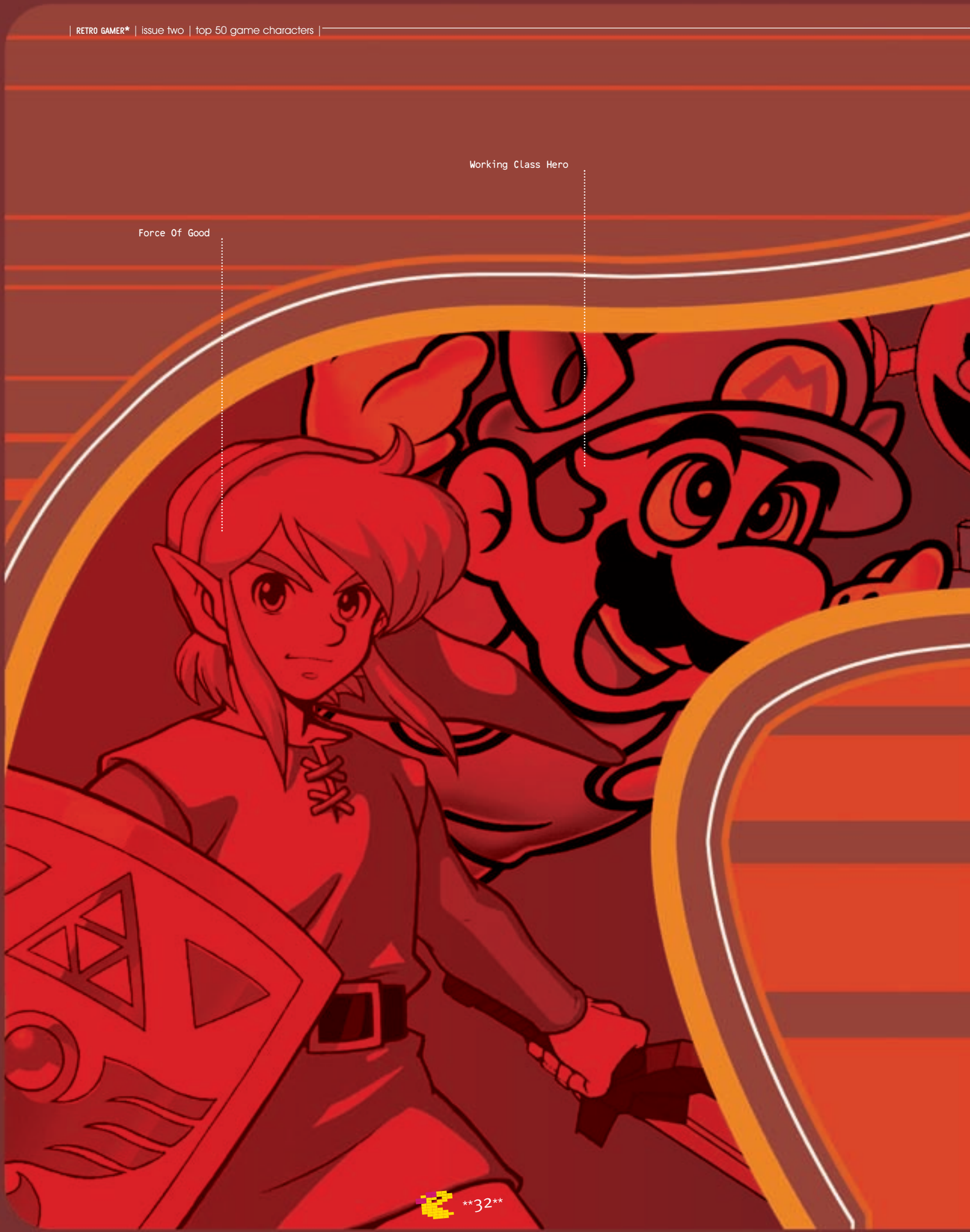
RG: Why Ovine?!

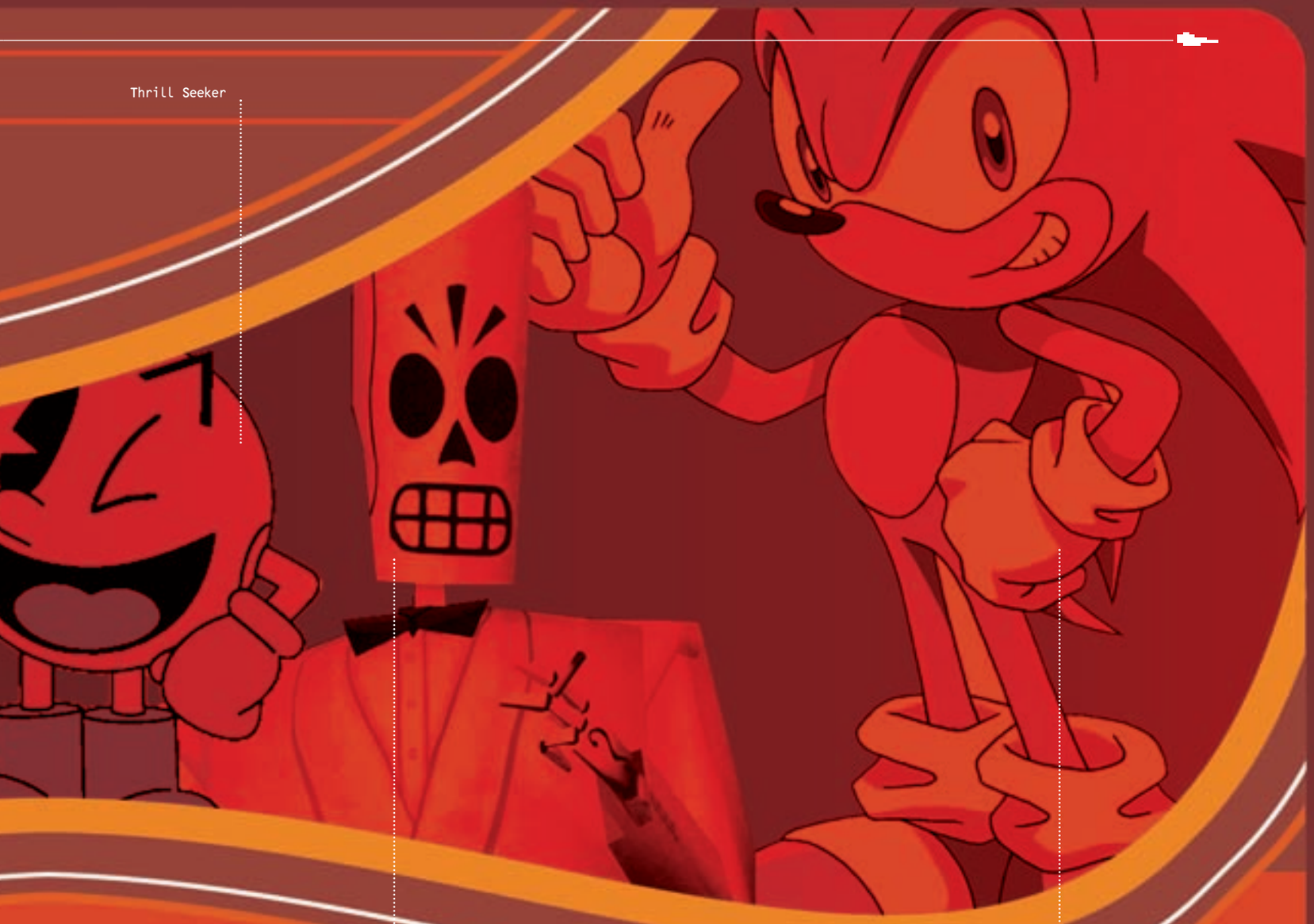
Andy: Why not? There's a long (and clean) story about the obsession with sheep, mostly centred around my natural ability to be able to draw them since emerging from the womb. We've been using the name ovine for many years now as its definition at dictionary.com best describes it: "ovine - Of, relating to, or characteristic of sheep; sheeplike". We are ovine by design.

Remake resources

We've packed over 100 remakes onto this issue's coverdisc, including many games from Retrospec and Ovine by Design. Youíll also find remakes from other scene members, including PeeJay, Smila and The Caffine Kid (TCK Soft).

For many more remakes, visit Retro Remakes (www.remakes.org). This Web site acts as a hub for the whole remakes community – attracting some 15,000 visitors a week – and it's where you'll fine the very latest remake news.


Working Class Hero
Force Of Good



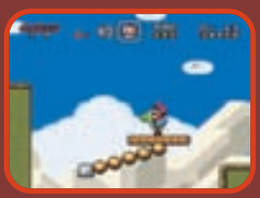
THE TOP 50 RETRO GAME CHARACTERS

>Top Ten Working Class Heroes

Today s gaming heroes won t get out of bed unless the world needs saving. But back in the day, there were a refreshing number of characters with everyday jobs. Plumbers, Miners, mechanics, bin men, traffic wardens - they re all represented here, and they re all working class heroes...

Mario

Nintendo's dungaree wearing, mushroom guzzling plumber is the single most famous and instantly recognisable game character of all time – bar none. This all stems from his first appearance in Donkey Kong (1981) where he was known only as Jumpman. After the huge success of the game, his changed his name to Mario, and a legend was born. Over the years we've had title after title, after title, most notably the first Super Mario Bros in 1985, that took the form of the platform formula we would grow to love. Mario's combination of platforming, power-ups, superb design and perfect playability make him an unmistakable gaming icon.



Miner Willy

It's the classic story of local lad makes good. Miner Willy stumbles upon a long forgotten mineshaft and discovers a fortune in its murky depths. Time to kick off the National Coal Board boots and buy a really big house. Forget about joining the picket line – join the jet set instead! Willy's helmet-light shone brightly for a brief time, appearing in Manic Miner in 1983 and Jet Set Willy the following year. A substandard sequel followed, and the job of keeping the legend alive was left to his own admiring fans. Dozens of updates and remakes reaffirm Miner Willy as Surbiton's favourite son. The granddaddy of platform heroes.

Hen House Harry

Hard up Harry never had the most desirable job in the world. Cramped in a stinking hen house, grabbing the eggs while avoiding killer chickens. And then there was the crazy duck to content with. And all this just to earn a living. The unlikely star of 1983's Chuckie Egg stands out as one of the most memorable 8-bit heroes. With his pot belly and oversized hat, he would risk life and limb for his daily pay. But fortune favours the brave, and in Chuckie Egg 2 (1985) he received a brand new, tastier job in the local chocolate factory. Good on him we say! Wolf it down!

Wally Week

Welcome to the wacky world of Wally Week. One minute he's a manic mechanic, building cars in Automania, the next he's on the wrong side of the law, robbing banks in Everyone's a Wally, another he's avoiding the cannibal's cooking pot in Three Weeks in Paradise. But no matter how weird and wonderful his adventures are, or how dangerous the situations he finds himself in, his flat cap and well maintained beer belly single him out as an everyday hero. The game's themselves were great too – Pyjamarama in particular standing out as a perfect arcade/adventure hybrid that has endured over the years as a classic title.

Paperboy

We'd all have delivered newspapers before and after school if the job was anywhere near as exciting as in Paperboy. Forget about trudging from house to house with a heavy sack on your back, because our peak-capped hero delivered the daily news on his BMX, hurling papers into the letterboxes of all the usual customers. There was also room for a little mischief, because you could use your papers to smash the windows of non-subscribers. And what did you get for completing your run? That's right – a well-earned spin on the BMX track. Everyone who played Paperboy (or its very similar sequel) wanted his job for real.

Chubby Gristle

Okay, so traffic wardens aren't the first people you'd think would make great heroes, but then, you've never seen one like old Chubby here. As Chubby, you had to wander around the town, tackling violations of the law and sorting out any parking offences. Chubby could move cars out of restricted places by pushing them around the screen and could interact with other objects. He bore more than a passing similarity to Jet Set Willy and Monty Mole (in both looks and gameplay), and was every bit as good as both of them. Sadly, too much bacon ended his career.

Guybrush Threepwood

Yo, ho, ho and a bottle of Grog! The one and only star of Lucasarts' Monkey Island series, and the most well mannered and friendly pirate you're ever likely to meet. Beginning his gaming career in the original Monkey Island as a wannabe pirate who washes up on the beach of Melee Island, it wasn't long before he met the love of his life, Elaine Marley, got on the wrong side of the local sheriff (Fester Shinetop) and eventually crossed insults with the dreaded pirate LeChuck. From then on, Guybrush became a star, and the second title LeChuck's Revenge made him even more of a classic hero.

Roger Wilco

Roger Wilco is quite possibly the most famous space janitor of all time. Long before Guybrush was a twinkle in Lucasarts' eyes, the star of Sierra's beloved Space Quest series was cruising around the space ways, visiting strange worlds and fighting evil in his own hapless way. Wilco first appeared in 1986 in Space Quest 1: The Sarien Encounter, and proved popular enough to appear in a further five games, the best of these being Space Quests III and V (arguably, as usual). For a hero that Ken Williams (co-founder of Sierra) was initially unimpressed with, Roger Wilco has become a classic cult figure. There may even be a seventh episode in the works.

Trashman

Please be upstanding for Trashman. Were it not for his litter picking skills, the suburbs would certainly be a less pleasant place. And his job is not without danger. Drivers seem to aim at him when he crosses the street and the neighbourhood dogs snap at his heels. The original Trashman was brilliant fun and the sequel, Travel with Trashman, in which he cleaned up various locations across the globe, wasn't bad either. A third game in the series was planned but never materialised, and we reckon it's about time Trashman was remade for the modern age. Then again, Refuse Collector doesn't have the same ring to it.

Eric

Young Eric, cheeky scamp extraordinaire, proves that life at the local comprehensive doesn't have to be dull. The unruly star of Skool Daze and it's even better sequel, Back to Skool, gets up to all kinds of mischief, from firing his catapult at the school swot to writing profanities on the black board. And just like Michael Broderick in War Games, he uses guile and cunning to get hold of his school report and change his grades, keeping him sweet with mum. When you were younger, Eric (or whatever you decided to name him) was the coolest game hero ever, and one you could actually relate to. We wonder what he's up to these days.

>Top Ten Forces Of Good

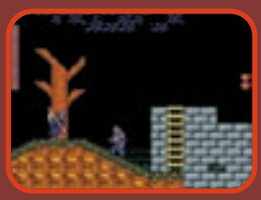
Whether they re defending the universe from hostile alien races or rescuing loved ones from the lairs of evil geniuses, these ten superheroes can only be described as pure forces of good. Evil doesn t stand a chance...

Link

With a huge number of games under his belt, Legend of Zelda hero, Link, is one of the longest running gaming legends. First appearing in the Legend of Zelda on the NES in 1987, he's been in several adventures on many platforms. Most memorably A Link to the Past, on the SNES, and The Ocarina of Time on the N64. His fighting skills, time-travelling antics and endless battles against the evil Ganon are flawless, and we sincerely hope he's going to be around for a long time to come. A very young Link can currently be found in The Wind Waker on the GameCube. Who knows, maybe we'll see a baby Link next time, if his reverse ageing continues.

Sir Arthur

The star of one of the oldest and most fondly remembered coin-ops of all time. Sir Arthur appeared in the classic Ghosts 'n' Goblins (1985) and then later re-emerged in the sequel Ghouls 'n' Ghosts. Sporting a pair of rather striking boxer shorts underneath a shiny suit of armour, he was on a quest to rescue his beloved Princess Guinevere from the forces of darkness. Jumping, dodging and axe-throwing his way through level after level of zombies, demons and other nasties, Arthur brought us an addictive, if devilishly challenging game. The original Japanese name of the game – Makaimura – means 'Demon World Village', and contrary to popular belief, Arthur has nothing to do with the Arthurian legends. He's just a knight with the same name.

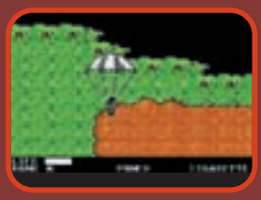


Magic Knight

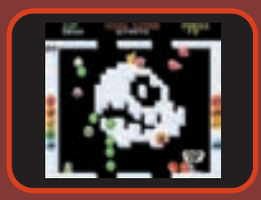
For a simplistic, oddly shaped character, Magic Knight is a game hero that demands the utmost respect. Not only has he saved a powerful wizard, helped the Norse god, Thor find his magic hammer, and survived a trip to the 25th century and back, but he's also brought with him a damn fine collection of games. Finders Keepers, Spellbound, Knight Tyme and Stormbringer are all excellent games, well ahead of their time. Relying on quick wits, intelligence and logic to puzzle-solve his way to victory, Magic Knight is one lord of the realm that is at home in any hall of fame. A timeless classic.

Solid Snake

While he's been around since 1987, first appearing in Metal Gear on the MSX and NES, followed by Metal Gear 2: Solid Snake and Metal Gear 2: Snake's Revenge (not a real Kojima title), most people remember him from the PSone uber-hit, Metal Gear Solid. Snake (based on Snake Pliskin from John Carpenter's Escape from New York), is a true Hollywood hero. No one is as skilled or as deadly as Snake, and he's done battle with armies, freaks, giant walking battle tanks, and can memorise HUGE scripts of dialogue, all without breaking a sweat. To put it simply, Snake's as hard as nails, and can even get away with wearing a mullet. Would you tell him otherwise?

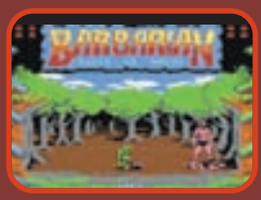


Bub & Bob



Ahhh, Bub and Bob, ex-bubble-blowing-dinosaurs-cum-rainbow-throwing kiddywinks. Being the stars of some of the most fondly remembered titles of yesteryear is certainly a big factor of membership to the top 50 heroes, as is the fact that they saved worlds, and their own girlfriends in a happy, happy, joy, joy way. Dispatching enemies with bubbles and rainbows is just plain funky, and the iconic dragons have also appearing in one of the greatest puzzlers of all time – Bust a Move (aka Puzzle Bobble). But for pure Bub and Bob action though, it's gotta be 1987's Rainbow Islands that takes the cake, and advanced the franchise to its peak.

Barbarian



Take Conan, throw in page three damsel Maria Whittaker, add a horny wizard called Drax and you have Barbarian: The Ultimate Warrior. Our muscle-bound, sword-wielding warrior is 100% pure beef fillet, and would think nothing of hacking off your head, and letting his little green pal kick it down the road. He may look a bit 'butch' on the game's artwork, but we'd rather keep our head attached to our necks, so he's getting his hero status with no arguments. We'll even forgive him for the awful second outing, as long as we can borrow his furry boots. Not to be confused with the point and click adventure of the same name by Psygnosis.

Duke Nukem

"Come get some!" are the words gamers around the world were rocking to when the Duke was the daddy. Duke Nukem is the wise cracking, lady-lovin', flat-top sportin', alien ass-kickin' hard guy that has starred in various games, on several systems. First appearing in Duke Nukem in 1991, which was a side-scrolling platformer, the Duke rose to power with the release of Duke Nukem 3D in 1996, which aappeared on practically every format around at the time. Duke is the ultimate cheese hero, and a true remnant of 80's action flicks. The next game, Duke Nukem Forever, may have been delayed for many years, but Duke is still a full-on action hero. All hail to the king, baby!

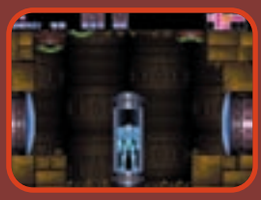
Dirk the Daring

Without a doubt, the epitome of the heroic knight – Dirk the Daring is the star of Dragon's Lair, the revolutionary laserdisc game of 1983. Designed and animated by ex-Disney animator Don Bluth, Dirk was on a quest to rescue Princess Daphne from the castle of the evil Dragon, Singe. To do this, you had to chose the correct joystick movement or button press, or Dirk would meet his maker in many interesting and gruesome ways. Despite massive odds, Dirk did Rescue Daphne however, and returned for several sequels and remakes. He was also responsible for the futuristic spin-off, Space Ace.

Shinobi

Let's face it – ninjas are just plain cool, and Shinobi (aka Joe Musashi) is by far the most impressive member of this elite group of assassins. Far from the backstabbing, sneaky ninjas we see so often though, Shinobi is a heroic warrior, fighting against evil of all kinds. He combated his foes with his trusty sword, throwing knives, powerful magic, and in his Shadow Dancer guise, even had a white wolf at his side. Revenge of Shinobi and Return of the Ninja Master on the Megadrive are both classic games. Shinobi even fought Spiderman – and won! Now that's a credential for you. Today, old Shinny is still alive and kicking on the PS2.

Samus Aran

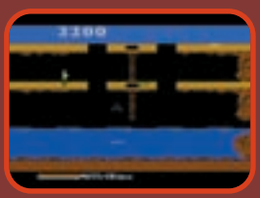


The star of Nintendo's Metroid series, Samus Aran, is the thorn in Mother Brain's and Ridley's sides, the scourge of the Metroids, and an armour-clad force to be reckoned with. Unbeknownst to the public until the end of the second game (and only if you got the best ending), Samus is actually female, and was ripping it up with the lads long before a certain Ms Croft arrived. Super Metroid on the SNES has to be the greatest Metroid adventure ever, and Samus is a truly awesome heroine. She remains a distinct female character, not relying on cheap thrills to capture the attention of gamers, which is more than can be said for some.

>Top Ten Thrill Seekers

Saving a damsel in distress, the world, or even the entire universe may be the ultimate goal for many eroes. But, to a select breed, such things pale in comparison next to hunting for ancient relics, driving fast cars, or simply getting their leg over. These heroes are in it for pure adrenaline, and here we have ten of the best...

Pitfall Harry



Run, jump, swing. Three skills Pitfall Harry knows all too well, and with good reason. The star of Pitfall, like many thrill seekers throughout gaming history, has just a passing similarity to a certain Dr Indiana Jones. Living on the buzz of adrenaline, Harry had to jump over logs, swing across crocodile infested pools and avoid a spiky doom, all so he could grab as much treasure as possible. As far as thrill seeking goes, dangling over a hungry croc's gaping maw is definitely high on our list. Ever since 1982, Harry has been running, jumping and swinging his way through a series of updates and remakes, and has appeared on all the major consoles.

Lara Croft

Okay, okay, we know that Lara isn't strictly a retro character per se, but she has been around since 1996, so she's getting on a bit. We also admit that her last couple of outings have been lukewarm at best, but, there's no denying that Lara is one of the greatest game characters ever, and is without a doubt a bona fide thrill-seeker. There's no place too remote and no situation too dangerous for our lovely Lara, and if she wants to grab an ancient relic, no traps, pits or foes are going to stop her. Flimsy outfit, ponytail, dual guns and she's ready to rock! Perhapes her best outing so far is Tomb Raider II.

Jetman

It would seem that the pursuit of riches is a prime target for thrill-seekers, and Jetman is no exception. Instead of ancient ruins or deep jungles however, our cosmic hero rockets around space, battling aliens and grabbing loot while reassembling his rocket and finding fuel so he can blast off to yet another treasure laden world. The task may sound simple enough, but fighting aliens and the forces of gravity isn't an easy affair, yet Jetman takes it all in his lunar stride, and produces an addictive game. Jetman can be seen rocketing around and blasting alien scum in Jetpac, Lunar Jetman and Solar Jetman on a range of different formats.

Jack the Nipper

Gems, pah! Treasure, who cares? Jack the Nipper was interested in one thing, and one thing only – causing mayhem and mischief in any way he could. Deciding that people in his neighbourhood were too goody-goody, Jack went on a mission to cause trouble, while avoiding a smacked backside from his mum. By using his peashooter and a variety of other items, Jack had to fill up his 'naughtyometer' by jumping on things, breaking stuff and scaring family pets. This is one baby that's well and truly booming, and is certainly the youngest thrill seeker here.

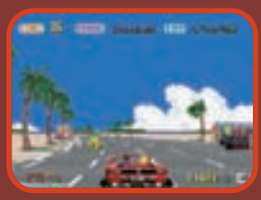
Rick Dangerous

This gun-wielding, dynamite-throwing adventurer is about as close as you can get to Indiana Jones without a lengthy legal battle. Rick crash lands amidst the Coolus, a maniac jungle tribe, who just so happen to be the people he's seeking out. Unfortunately for him, this results in a frantic escape leaving our hero running for his life, avoiding enemies and a whole boat load of traps. Rick's adventures were as perilous as his own name, and in true Indy style, he took us on a rollercoaster ride of survival. And yes, you were even chased by a large, rolling boulder.

Leisure Suit Larry

They say that the average man thinks about sex every ten seconds. If this is true, then Larry mustn't think about anything else, ever! Larry is a thrill seeker of a very different kind, and is in constant search of the more 'physical' thrills. He's a small, balding, smooth-talking, but hapless disco lover, who in the original title (Land of the Lounge Lizards, 1987), is desperately trying to find the woman of his dreams, in order to get his end away, so to speak. After several episodes, Larry is still as balding and hapless as ever, but he's just never going to stop on his endless quest for lurve.

The Outrun couple

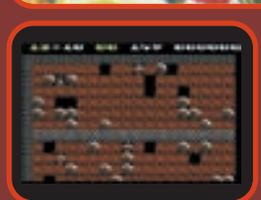


What could me more thrilling than driving at insane speeds through a tropical paradise in a high performance sports car? Not much really, and the Outrun couple are inclined to agree. Bursting along the highways and byways in a Ferrari Testarossa, to the tunes of 'Magical Sound Shower', 'Passing Breeze' and 'Splash Wave', this high octane duo provided us with one of the earliest driving classics way back in 1986, and returned for more in Turbo Outrun in 1989. The combination of the then revolutionary 'Super-Scaler' technology, and toe-tapping soundtrack, is ageless. Burn rubber!

Pac-Man

No Hall of Fame would be complete without this rotund, yellow, pill-poppin' fella. You may think that ol' snappy isn't a thrill seeker as such, but what else would you call someone who constantly downs pills, chases ghosts and lurks around dark mazes all day? Pac-Man was originally called Puckman, but as the middle of the P could be scratched away, with obvious results, the name was changed. Inspired by a pizza with a piece missing, Pac-Man has been with us since 1980, and remains one of the oldest game characters around. He's starred in numerous spin-offs, and has even brought his extended family along for the ride.

Rockford



The frantic digger from Boulder Dash grabs a place in our Hall of Fame thanks to his brand of extreme potholing. Hungry for gems, Rockford dug his way through cave after treasure-filled cave, avoiding falling boulders, and various fast-moving inhabitants. All this with no special gear or weapons, just his hands, and his noggin. More of a puzzle game than an adventure, Boulder Dash has been cloned time and time again since it first appeared in 1984, and it seems as though every bedroom coder has had a go at reproducing the winning formula. But, even now, there's only one Rockford for us, and no cheap imitation is going to cut it.

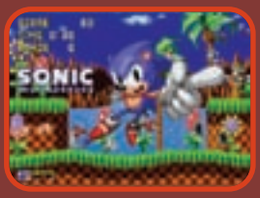
Sabre Man

This fearless explorer is perhaps the ultimate thrill seeker, having ventured deep into the dangerous jungle with just a single flimsy sword to protect himself with. His memorable appearance in Sabre Wulf quickly led to starring roles in Underwurlde and Knight Lore. All of these game were released in 1984, making him one of the most prolific 8-bit characters of all time. An appearance in Pentagram two years later was the last we saw of him – that is until the release of his new GameBoy Advance adventure, soon to be with us. Of all yesterday's heroes, we're particularly pleased that Sabreman is making a return.

>Top Ten Animal Crackers

We re a race of animal lovers, so it s no surprise to see games starring cute critters and four-legged fur-balls. Here s a rundown of our favourite animal characters, starting with the fastest hedgehog in the West...

Sonic the Hedgehog

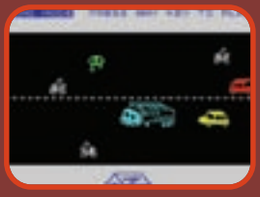


1991 saw the arrival of Sega's world-changing hero, Sonic, and with it, a new breed of game was born. Although there were many animal characters before, it was Sonic that really started the trend, and he pumped a dose of new blood into the increasingly stale platform genre. Capable of supersonic speeds and razor sharp somersaults, Sonic endlessly fought the evil Eggman (aka Dr Robotnik) in game after game. He even bounced around giant pinball tables in Sonic Spinball (1993) and eventually entered the world of 3D on the Dreamcast in Sonic Adventure (1999). He's blue, he's fast, and he's an all time great.

Donkey Kong

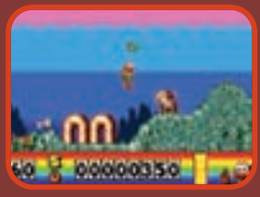
This banana-lovin' hero has been around longer than most, but he's not always been the heroic guy we know now. Originally the main enemy in the first Donkey Kong game, with the player controlling Jumpman (who would eventually become Mario), he has since become a popular Nintendo icon. Perhaps his best game to date is Donkey Kong Country on the SNES (1994), which also starred Donkey Kong Jr, and the rest of the Kong family. Oddly enough, Donkey Kong actually means 'Stupid Monkey', and has never been changed despite his rise to stardom.

Horace



An odd one, and that's for sure. Horace is a creature of some description who first appeared in Hungry Horace (1982), suffering from a bad case of the munchies. Like Pac-Man, our odd little friend had to eat pellets and fruit while avoiding the park ranger (who was nothing more than a eerie floating head in a baseball cap). In 1983, Horace Goes Skiing saw him crossing a Frogger like road to grab his skis, before slaloming down the powdery slopes, and in 1983, he had a bit of a spider problem in Horace and the Spiders. A classic cult hero, Horace is a name we'll always remember, if only for the sheer oddity of it all.

James Pond



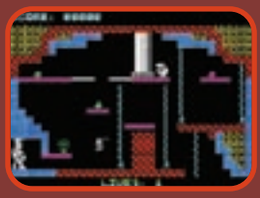
James Pond first appeared on our screens in 1991, and was a parody of secret agent 007. Instead of the usual run and jump affair, Pond had to swim around various levels, rescuing hostages, finding keys and blowing up targets. He appeared again for James Pond 2: Robocod later that same year, doing battle against the evil Dr Maybe who had taken over Santa's toy factory (boo, hiss!). This was one of the greatest platformers of all time, and the first real console-like game on the home computer. James Pond 3: Operation Starfish was the next instalment, and saw Pond explore space and a cheese filled moon in a Mario-esque adventure.

Earthworm Jim

This down to earth hero arrived in 1995, courtesy of Shiny. After having a super secret atomic spacesuit drop on top of him, Jim's life was changed forever, and he'd soon do battle with Psy-Crow and Queen-Slug-For-a-Butt, while trying to save Princess what's-her-name. Earthworm Jim enjoyed totally bizarre adventures and fought weird and wonderful villains. He was also partial to launching the odd cow into space, and had a pet dog called Pete who could turn into a ravenous monster. Cool. Like many other heroes, he even got his own cartoon show.

Monty Mole

Our silky-skinned, earth moving friend starred in a whole series of classic puzzle platformers. The first, Wanted: Monty Mole (1984), saw him preparing for a long, cold Christmas by stealing coal from his local South Yorkshire pit. Jailed for his crime (awww!), he was later freed from Scudmore Prison by pal Sam Stoat, only to be hounded across Europe by the bastions of law and order. The Monty Mole games just got better and better over time (if you discount Impossimole, the disappointing final entry in the series), and it's no surprise that he's one the best remembered characters of the 8-bit era.

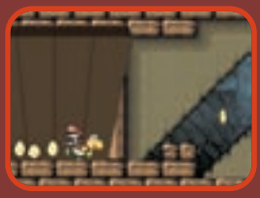


Head & Heels

How about this for a weird and wonderful pairing? Head (Headus Mouthion) is descended from a breed of flying reptile and still has small wings that allow him to jump twice his own height. Meanwhile, Heels (Footus Underium) has no arms at all, just very powerful legs that allow him to run very fast. Put the two together and you've got one of the greatest double-acts in the history of gaming. Which begs the question – why no sequel? Who knows, but at least we can revisit the experience by playing the excellent PC remake. Hard as nails, and great fun with it. Awesome.

Yoshi

Mario's faithful steed, and a star in his own right. Yoshi first appeared with the arrival of the SNES and Super Mario World, back in 1991. Offering Mario a ride, Yoshi thought nothing of devouring the moustachioed one's foes with his frog-like shooty-outy tounge, and wanted to help rescue his friends who had been imprisoned in castle keeps. Since then, Yoshi has been in many other Mario titles, including the excellent Mario Kart and Mario RPG, as well as his own games, such as Yoshi's Safari, Yoshi's Island, and Yoshi's Story. Any creature that can lay eggs that hatch mushrooms and coin-dropping clouds is okay by us. Respect.

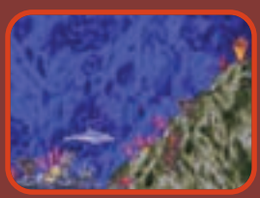


Sam 'n' Max

The Freelance Police are two of the most adorable characters ever to appear in a game. Sam, the wise cracking dog detective, and Max, his rabbit-like psychotic sidekick, brought us a genuinely humorous and enjoyable romp through a zany cartoon world. Ranking high up there with the likes of the legendary Monkey Island, the duo's adventures are 24 carat solid gold, and both characters were instantly likeable, drawing players in with their witty dialogue and twisted puzzles. Sam 'n' Max Hit the Road arrived in 1993, and a new instalment is currently in development for the PC. Play it again Sam!

Ecco

When this underwater hero arrived in 1992, Megadrive owners were taken totally by surprise. Ecco was an instant hit, and with its amazing graphics, soothing music and incredibly challenging gameplay, this humble dolphin rose to be the defender of the whole planet. After his pod are kidnapped by an evil alien race, Ecco travels the oceans, and even ventures into space, eventually defeating the alien menace and gaining special powers. He had a questionable return in the average Ecco 2, but really came back with a watery bang in the excellent 3D Dreamcast incarnation, Ecco: Defender of the Future.



>Top Ten One-Hit Wonders

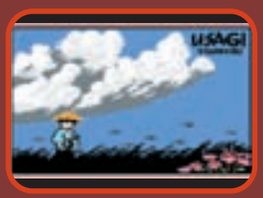
Some characters are unleashed on the gaming public and become enduring legends, staying around for sequels and spin-offs. Some even change our culture or affect the whole industry. Others however, disappear up their own existence faster than a greased weasel down a drainpipe. Here are the top 10 characters who vanished well before their time...

Charlie the Chef

This culinary character starred in Cookie, one of Ultimate's earliest titles. Charlie kept his ingredients locked in the pantry, and only let the out when he needed them. The trouble was, his ingredients didn't like this situation and tried to escape, along with a group of inedible nasties! Using flour bombs, Charlie had to knock the likes of Colonel Custard, Crafty Cheese and Sneaky Sugar into his mixing bowl, while avoiding the nasty Terry Tack, Bernie Bolt and Mike the Pike. A classic example of simple, yet odd gameplay with a lovable gaming star, even if he didn't have a head!

Usagi Yojimbo

The star of Samurai Warrior, Usagi Yojimbo is a warrior rabbit on a quest to rescue a panda by the name of Lord Noriyuki, who has been captured by Lord Hikiji. Wandering through the land, Usagi had to bow to friendly characters to show respect, and only draw his sword when faced by enemies. The action adventure rabbit was an ideal game star, but began life in a series of comics and RPG books created by Stan Sakai. His name actually means 'Rabbit Bodyguard', and this white samurai has even co-starred with the Teenage Mutant Ninja Turtles, eventually getting his own action figure.



Chuck D Head

This singular hitter is one of the more bizarre characters around, not only because of his nature, but also because of his dual life. Starring in DecapAttack on the Megadrive, Chuck was an undead mummy who would hurl his head at his foes, and had eyes in his chest. Before arriving on English shores however, Chuck was a whole different kettle of fish. Instead of a mummy, he was originally a Japanese kid who could wear different magic hats to give him various abilities, hence the original name, Magical Flying Hat Turbo Adventure (a popular Jap cartoon).

Dynamite Headdy

Another distinctly odd game hero here. Coming from those talented folks at Treasure, Dynamite Headdy was a quirky character who could swap his heads, Worzel Gummage style, gaining many different powers with each one. By shooting his detached head, he could use skills such as attack, climb and shrink to fight his way through an amazingly colourful and bizarre world, populated by toys and puppets. Although we only had chance to see him once, Headdy is a great character, and bears a striking resemblance to the future game star Rayman.

Gunstar Heroes

The stars of the best Megadrive title, and one of the greatest games of all time. This was Treasure's first appearance on the gaming scene, and what an arrival it was! The heroes, Red and Blue, blazed their way, running, jumping, climbing and blasting through endless enemies and bosses in an ultra high-octane festival of action. The game was so good, and the cast of characters so strong, it's amazing the Gunstars didn't get a second outing. Add in a superb two player mode, and the adventures of Red and Blue were out of this world.

Manny Calavera

Lucasarts had a sure fire hit with Grim Fandango, an arty adventure through the land of the dead. The game's star was Manny Calavera, a travel agent at the Department of Death (that's grim reaper to you and me). After losing an important client, Manny sets off across the afterlife to find her, and gets mixed up in a deep, intriguing conspiracy. Along the way, he opens up his own nightclub, becomes captain of a ship and joyrides in one hell of a lowrider. With tons of Latin charm, and a captivating personality, Manny is an unforgettable game hero.

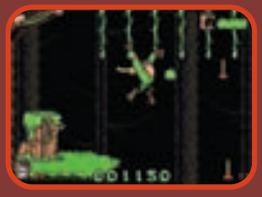
Mr Nutz

Mr Nutz was a plucky young Squirrel on a mission to stop the evil Yeti from turning the world into one large ball of ice. Romping through level after level, collecting acorns and defeating enemies, this was a typically cute and colourful platform hero, not out of place in a Nintendo line up. Sadly, he only got one outing, despite gorgeous looks and entertaining platform fun (must have gone into an extended hibernation, the lazy layabout!). He also appeared briefly on Sky One's popular Gamesworld show as part of a phone-in game featured in the Wednesday night interactive program. Perhaps he eventually retired and let Conker take over...

Nights

When we fall asleep, we drift into Nightopia, land of dreams. Wizeman the Wicked rules this land, and steals dreams from little children. One evening though, two children come under the protection of Nights, a brave Nightopian. This jester-like flying hero could glide through the air, performing all sorts of aerobatic tricks, and could gracefully defeat the evil of Wizeman's empire. One of the best games to appear on Sega's ill-fated Saturn, Nights into Dreams was an original and hugely enjoyable title. Nights wouldn't be out of place in a Disney epic, and we sincerely hope he gets another outing sometime soon. Come on Sega, we want more!

Boogerman



The epitome of school boy toilet humour everywhere. Boogerman, star of Boogerman: a Pick and Flick Adventure, was an inevitable character, and possessed amazing nasal powers. By flicking snot and sneezing at his enemies, this green superman was a force to be reckoned with on his journey through such locales as the mucous mountains and the flatulent swamps. His rear end was just as active as his nose however, and his mighty fart attacks were something to behold. Boogerman might not have graced the best game in the world, but he was a great character that didn't want to be taken too seriously.

Chakan

The forever man, star of his own comic, appeared on the Sega Megadrive in 1992 and starred in one of the darkest platform adventures on the console. Wielding his twin swords, and sporting powerful magical abilities, Chakan had to wander a hellish afterlife in a quest to defeat all of the evil that resides within. Only once his task was complete could he finally rest. Chakan as a game wasn't a classic, and didn't really push the genre that far, but as a character, he was an excellent creation, and it's a surprise we haven't seen him since (he was planned for a 3D Dreamcast remake, but this never happened). At least he finally found peace, bless him.

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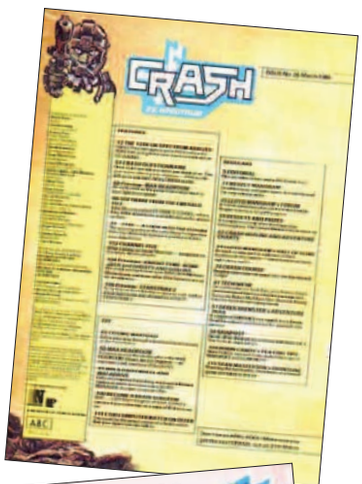
INSIDE CRASH TOWERS

With titles like Crash and Zzap 64, Newsfield changed our view of video gaming magazines forever. Employee **Matthew Uffindell** was there from the very beginning to the bitter end, and reveals the inside story on this revered publisher

I was reading through Your Computer in 1983 when I stumbled across a half-page mono advert for a mail order company called Newsfield that was selling Spectrum games out of a residential address close to where I lived. Intrigued by the fact that a software mail order firm had been set up in a small rural town such as Ludlow, I quickly realised it was the perfect opportunity for me to easily expand my budding games collection. So I decided to pay them a visit.

From the moment I knocked on their door my life was transformed – which at the age of 17 was no mean feat. Roger Kean invited me in and introduced me to Oliver Frey and his brother Franco Frey. I had an enormous interest in the games industry, frequently visiting arcades to play on the latest games, and the three of them quickly cottoned on to my enthusiasm and offered me a job in mail order despatch.

It wasn't long afterwards that I started reviewing games for the catalogue sent out with every order. The catalogue was such a success that WH Smiths was approached with an idea of a games review magazine for the Spectrum. They thought that it was a unique idea and Crash was born a few months later, produced on a shoestring budget. It was an instant success. The content was different from that of the other magazines of the time, which mainly concentrated on program listings that needed typing in.



Cover story

It's January 1984 and you've got a pound note in your pocket. Which Spectrum magazine do you go for? Sinclair User is still banging on about the ZX81 and has a bearded rock climber on the cover. Your Spectrum is talking about keyboard buffers and chess tournaments. And then there's Crash, with an arcade-loving alien on the front and the promise of over 400 game reviews inside. It wasn't a difficult choice back then

Three's a crowd

Reviews in Crash were detailed, unbiased and written by three people – Roger Kean, myself and the legendary Lloyd Mangram. Lloyd was a character, well, sort of. A little, if at all known fact was that he never existed! Lloyd's input was the joint combination of text and opinion from both Roger and myself. I don't think anyone else has ever admitted to that before.

Roger and I worked in an area smaller than your average bathroom. A rented TV, a 16K Spectrum with the dreaded 32K RAM pack, and a typewriter were all the two of us had, and from that room hundreds of games were play tested, reviewed and photographed. I would dictate a review to Roger while playing the game and he would tap eagerly away at his typewriter, then play the game himself for a while before committing his views to paper. The afternoons were still dedicated to mail order fulfilment, something that became a mammoth task because Crash was in effect a huge catalogue for the mail order side of the business. As the magazine grew, so did our mail order commitment.

After a while Chris Passey, another reviewer, joined us. He used to take away a batch of games, play them to death and return with rough cut reviews about a week later. His reviews supplemented Roger's, 'Lloyd's' and mine, so between us there was never any problem in producing the now standard three views per game.

In the meantime, Oliver Frey created the most amazing cover illustrations for Crash. They were totally different from anything else in the marketplace and inspired by a major game release or the lead topic in each issue. It took several days to complete a cover illustration which would start as a rough pencil outline gradually built up with solid inks and airbrushing. It was like watching an old master at work. Each of us would occasionally give him input into where we thought an improvement could be made. Sometimes Oliver accepted the comment and implemented the idea, other times he would bluntly tell you to go away. Creative geniuses are like that so we accepted it.

Oliver's covers, our software reviews and previews, Franco Frey's hardware reviews (Oliver's brother was a techno-whiz who eventually went on to design a brilliantly simple joystick interface called the ComCom), and regular hints and tips meant that Crash quickly developed into a market leader. At its height it had a circulation in excess of 100,000 copies per month – something that was unheard of at that time for a single platform magazine.

As things grew we became more professional and so did the magazine. I remember when my first kit upgrade arrived. It was a Microvitec Cub and only came in for a hardware review, but never got returned. This transformed

Sinclair spoof

The competition (magazines such as Sinclair User) caught on to the idea of our reviewing style and tried to copy it, albeit without the success that Crash had enjoyed. This led to some serious rivalry and things got a little out of hand when we decided to run a section in Crash called Unclear User. It was a total rip off of Sinclair User's design style but the text was re-written to reflect the section heading. Sinclair User issued legal proceeding against Newsfield and forced tens of thousands of copies to be recalled, with the offending pages removed by hand at the printers and then redistributed. An enormous amount of sales were lost and it was a real low point in the history of Crash. We had to print a full apology in the following issue, but the tension always remained between the two magazines.

the screenshots from fuzzy unsaturated stills to what was then stable, sharp and vibrant colour. It was a visual pleasure while playing games.

Commanding power

Software Houses quickly realised that a good review in Crash helped them to sell loads of games, even more so when a title was awarded a 90% plus rating, earning it Crash Smash status.

This became a point of power in some respects. Software companies pleaded for a Smash award, giving us beta games for trial reviews. If we didn't award a game a Smash they would ask us how they could change their games in order to get one. Ruthless and unbiased was the only way we knew though. If a game was rubbish we would look the programmers in the eye and say so. They knew we couldn't be bought and because of this, we gained total industry respect.

The power of reviews could be seen in the shops where huge chains refused to stock games unless they had prior knowledge that it would be a Crash Smash. The team could make or break a business just by writing a rave or damming review.

Many smashes were previewed successfully in beta stages. Programmers would bring in monster computer development systems all racked up so that they could see our reactions to they latest creation. Crystal's Dark Star was presented in this way. It was so blindingly quick – it just had to be seen to be believed. (For the record I always thought that Realtime's Starstrike had the edge and was more playable but I might have been biased as it was co-designed by a former Ludlovian chap).

We developed a special relationship with quite a few companies, including Ultimate. No other magazine managed to get anywhere near as close to them. Ultimate were at the pinnacle of programming Spectrum hardware. We always managed to get the latest piece of software before anyone else. The major benefit of a small team was that we were able to react exceptionally quickly to new releases and often took the review of a game up to the print deadline.

Onwards and upwards

After several months of writing in what was effectively a cupboard, it was decided that more space was required. An office building in the centre of town became available. This was leased, and carpets were laid in various rooms.

By this time, the number of staff had increased to a heady six. Denise Robert had been employed in the early part of the year to take over my duties on the software side of the business, leaving me free to concentrate on reviews. David Western was taken on to lay out the magazine (which was done with galleys for text, cut up and pasted onto layout sheets) and improve the screen shots which appeared in the magazine. This freed up Roger from that side of the business.

:-Codename who?

For me, Micromega's Derek Brewster produced perhaps the most memorable beta game. I remember him paying us a visit from Newcastle. He silently loaded his then untitled game and I watched amazed. The 3D graphics were fantastic for the day, with great game play. I remember taking it home with me in the evening and playing it through the night. I raved about it. Derek must have realised how important my opinion was to the success of this game as from that point onwards it was called Codename Mat.

The rumour is true. Codename Mat really was named after Matthew!

Unbeknown to me, Roger, Oli and Franco had decided to turn one of the rooms into a photographic darkroom where mono screen shots could be turned into halftones (converted into dots for printing). Aware that I had a keen interest in photography they asked if I would like to do the honours, which of course I did.

It was nice to finally have some space. Roger and I spread ourselves around. I would play a game as usual but then pace up and down the room dictating the review while Roger tapped away on his new Apricot computer. Once we had covered all the software releases for a month Roger and I moved upstairs, where Roger helped David with the layout and I produced the halftone pictures. We then decided to make final films of the layout sheets (trying to cut costs and push out even more time before printing).

Another school age reviewer joined the team. At just 13 years old, Robin Candy showed potential, reviewing with the same ruthless criticism I did. On several occasions we made news headlines. Camera teams set up studios in the office and on one occasion both Robin and I had to travel down to Plymouth for a 15 minute slot on a Saturday teen program showing off our game reviewing skills.

Christmas was always crunch time for us. We had to produce a magazine twice the size in half the time due to the schedule available. Roger and myself worked tirelessly reviewing before moving onto our other tasks. I remember one time working through the night – my feet were killing me so I nipped home and brought my slippers in! We had just three hours sleep before it all had to be repeated. We were all so tired, but the end result was worth it.

Roger and I started to develop basic colour planning (putting colour elements on a page) within the magazine, which became more and more complicated as time went on. It also became more time consuming. It was at this stage that something just had to give, and that something was me. After 18 months of reviewing just about every title ever released for the Spectrum, I told Roger that I just couldn't do it any more. Totally wiped out from gaming overload, I had to look to another direction for fulfilment. The art department beckoned and so I moved over to further develop the repro side of things, expanding it as the business grew into other areas.

The Crash parody and the Sinclair User cover that inspired it. A bit of fun, but Emap weren't laughing

>Beyond Crash

A Commodore title, based on the tried and tested Crash format, was launched in 1985. Zzap 64 was an instant success and became the most successful Commodore 64 title available. Amtix, a magazine for the Amstrad CPC range, followed it. Unfortunately, the hardware never found a large following in the gaming arena despite being technically more advanced than the Spectrum. Failure is a matter of opinion, but while the machine found some business use, few original non-Spectrum ports appeared for it. The magazine lasted around 18 months before being sold to another publisher.

Other magazines came and went. LM (Leisure Magazine) was aimed at the teen market and while it was a nice title, it proved expensive to produce. It also failed to attract the level of advertising needed to survive and as a result was axed after issue four. I was fed up about this at the time. The film planning team and I had just finished the work for issue five and it all had to be dumped. What a waste. It was an immense shame – if the funding had been there then I feel that the magazine would have done well long-term.

A budget horror magazine called Fear was launched shortly afterwards. It was mainly mono and aimed at a niche market – too niche for my liking. It was a bit of a chore to produce but it at least showed a small profit so I guess it was worthwhile.

By this time the company had grown and grown. It was now spread over three sites (we had runners who moved mail from one site to another) and we had 60 members of staff. To give you a sense of scale, we were the local Post Office's biggest customers. Bags of fan mail arrived everyday, even more when we ran exclusive competitions.

Finally, the decision to move everyone into a single building was taken in 1990. Somehow though, I felt this move destroyed the atmosphere that had inspired everyone. Looking back I guess the company was growing up and I didn't like it! Several new titles were launched but none repeated the success of Crash and Zzap. The market place became unstable, with more and more magazines competing for an ever shrinking slice of action.

Crash and burn

In 1991 the Newsfield Group (the collective holding company of all the titles) went into liquidation. At that time, the country was in recession and the games' magazine market place was collapsing. It came as a bit of a reality check for me. It was totally unexpected and came right out of the blue. I was totally devastated. I had so many happy memories, and they were destroyed in an instant. It took a long time to get over it.

Newsfield and its magazines, especially Crash and Zzap, were the bible for the games' player and the games' industry. They forced other publishers to look at what the consumer really wanted

Newsfield timeline

June 1983

Newsfield begins life as a mail order company, sending out a free software catalogue to its customers.

October 1983

After the success of its software catalogue a Spectrum reviews magazine is planned.

January 1984

First issue of Crash hits the newsstands, priced 75p. Circulation eventually achieves over 100,000 copies a month.

March 1985

First issue of Zzap 64 hits the newsstands, priced 95p. Circulation eventually achieves over 68,000 copies a month.

October 1985

First issue of Amtix hits the newsstand, priced £1.

December 1986

LM, Newsfield's teen entertainment magazine hits the newsstand. It folds after issue four.

March 1987

Amtix is sold to Database Publications

September 1987

The Games Machine, Newsfield's first multi-format gaming title hits the shelves.

June 1988

Fear magazine, produced under contract with John Gilbert, hits the newsstand priced £2.50.

September 1988

Movie: The Video Magazine, designed to cash in on the falling price of films on video, hits the newsstand priced £1.90. It appears popular but isn't as successful as hoped, closing after issue seven.

September 1989

Prepress With the Macintosh magazine, designed to cash in on the growth of the Apple Macintosh in the world of professional publishing, hits the newsstand. It eventually breaks even and begins to make a small profit.

and proved that well written magazines were the only way forward. It's quite amazing that many of the large companies in the games industry now have at least one ex-Newsfield employee working for them (Future Publishing was started by Chris Anderson who was a Zzap editor for several issues). That must be a lasting tribute to how Crash and Zzap moulded individuals minds and inspired people not to follow the pack, but lead from the front.

Europress took over a number of Newsfield titles and about half its staff. The titles sadly only lasted for a couple of years.

The present

It's quite odd to think that the original three Newsfield creators – Roger, Oli and Franco – are still plugging away in the publishing industry, producing wonderful historical atlases, pet reference books, and have contract work with certain blue chip companies. Their company is internationally established in its area of expertise and it just so happens that I still work for them and have done on and off since the demise of Newsfield. Some friendships are difficult to break I guess.

I still dust off my Spectrum from time to time, load up my favourites and relive an age where gameplay was key and graphics were left a little to the imagination. My children are fascinated by it all, but still prefer to play on their Xbox. I suppose I can't blame them. The Spectrum looks so incredibly primitive in comparison.

RG*

>Online resources

Crash - The Online Edition (www.crashonline.org.uk)

All 98 issues of Crash covered, with HTML versions of many pages and high-quality scans of every classic cover. Excellent stuff.

The Def Guide to Zzap 64 (www.zzap64.co.uk)

Every issue of Zzap 64 lovingly catered for, including the Commodore Force issues. Also home of the fan-written issue 107.

CPC Magazine Covers (http://users.durge.org/nich/cpcmags)

There are no dedicated Amtix sites on the Web, but this site contains high-quality scans of every cover (including the rare issue zero).

November 1989

The first issue of The Complete Computer Entertainment Guide (CCEG), a quarterly games buyer's guide, hits the newsstand priced £1.95.

July 1990

GamesMaster International, a low-budget, fantasy role-playing magazine hits the shelves priced £1.75.

October 1990

Raze, the renamed, revamped replacement for The Games Machine hits the newsstand priced £1.95.

November 1990

The second issue of The Complete Computer Entertainment Guide reaches the newsstand.

March 1991

The third and final issue of The Complete Computer Entertainment Guide hits the newsstand.

June 1991

Frighteners, a Fear spin-off, hits the newsstand priced £1.50. The first issue is pulled off sale after an irate purchaser complains about one of the short stories inside.

September 1991

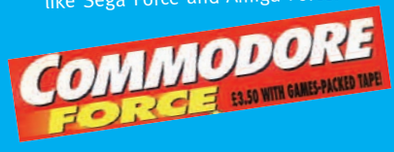
With a month to go before its two forthcoming magazines, Sega Force and N-Force (designed to replace Raze after issue 13) are due to be published, Newsfield is put into voluntary liquidation. Europress Publications eventually buys up the company's assets, turning what was Newsfield into Europress Impact.

May 1992

After just five issues, Europress Impact sells Crash to Emap. The magazine is incorporated into issue 123 of Sinclair User.

December 1992

Zzap is renamed Commodore Force to fall in line with Europress Impact's other games magazines like Sega Force and Amiga Force.



April 1993

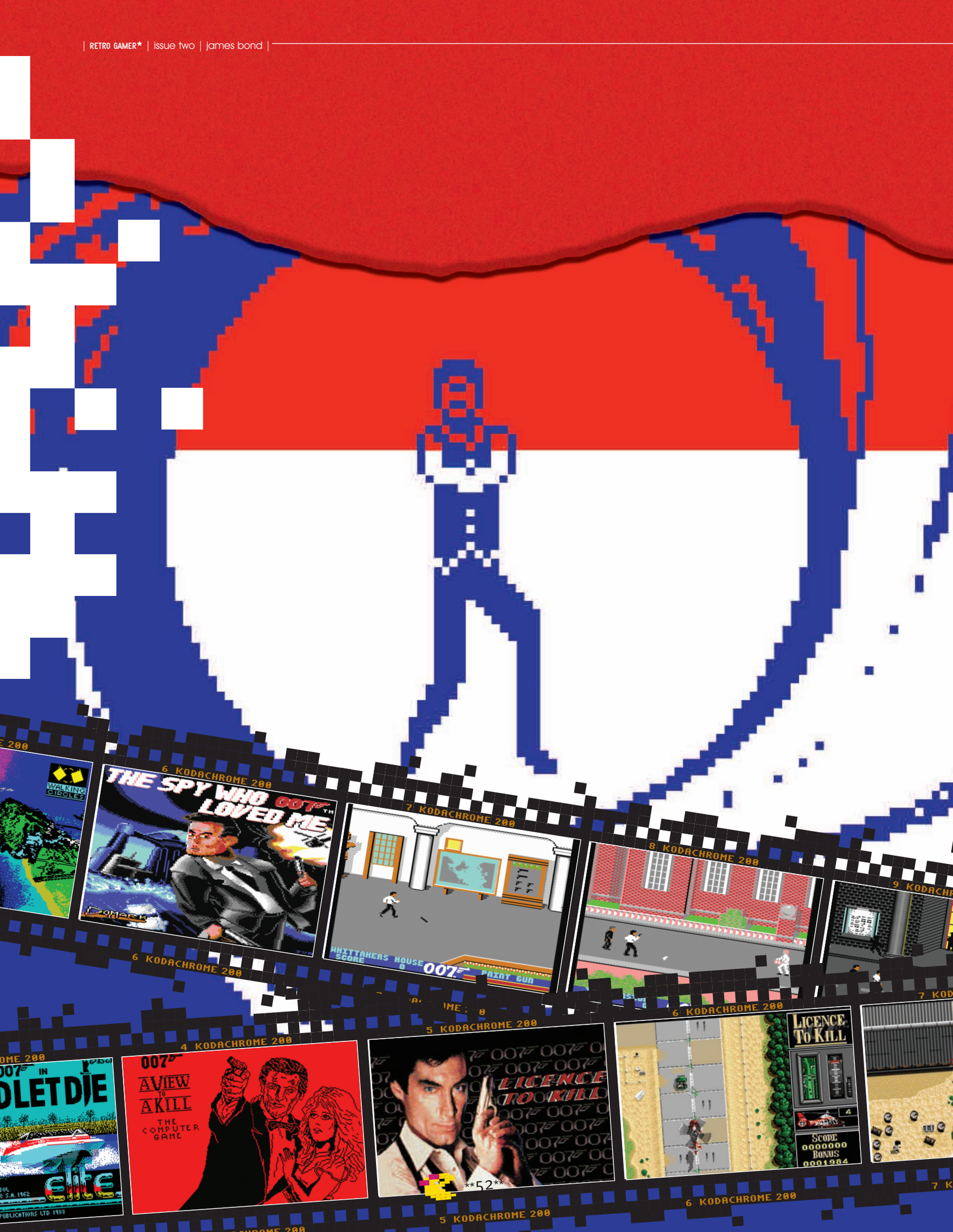
Sinclair User closes after 11 years, taking Crash with it.

March 1994

Europress Impact goes into receivership. Commodore Force issue 16 (Zzap 64 issue 106) is the last.

March 2002

Eight years on from the closure of Zzap 64, fans of the magazine create issue 107. It's available as a free download (in PDF format) from **www.zzap64.co.uk**. Issue 108 is in planning stages at the moment.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A VIEW TO A KILL
THE COMPUTER GAME
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=Play Another Day

He's got a view to a kill, rakes the moon, has a spy who loves him and scares the living daylights out of us, and that's just **Aaron Birch** on a weekday! Lucky he's on Her Majesty's Secret Service then...

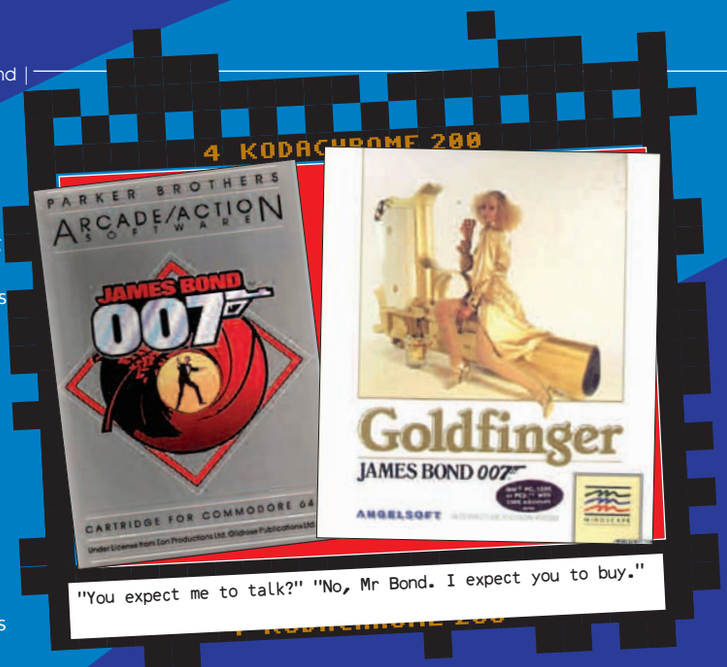
James Bond is one of the rare breeds of hero who's stood the test of time, and after many face changes, is still pulling in the crowds. He's a man's man and a woman's dream. Slick, debonair, sophisticated, intelligent, witty, fearless and as hard as nails. He's saved the world more times than we've had pints of stout, and he gets to play with the coolest gadgets and drive the best cars. It's no wonder that the video-game industry has time and time again given 007 the movie tie-in treatment. We've seen Bond on pretty much every format you can imagine, from the ancient Atari 2600 to the present day consoles and PCs. Over the next few pages, we're going to take a look back at the most memorable Bond games, as well as some other titles that pay homage to the greatest secret agent the world has ever known. Do pay attention then.

I expect you to play

Bond games have had something of a turbulent history, and there have certainly been a fair few hits and misses in the past. Just like most movie tie-ins, really. Often, games would be based around one section of a movie or, in some cases, have nothing to do with the film bar the name. One thing has always remained true though – big licences make big money, and this was just as true in the past as it is now.

The first Bond game of note was the imaginatively titled James Bond by Parker Bros (1984), which appeared on the Atari 2600, 5200 and Commodore 64. Although it only bore the name James Bond on the box, the game itself was actually based (somewhat bizarrely) on Diamonds are Forever, and took the form of a side-scrolling shooter, in which you had to drive a moon buggy-type vehicle (that looked oddly like the white Lotus from the later Moore flicks) across a landscape punctuated by fiery chasms and other obstacles. While shooting a range of strange flying enemies, you had to jump and collect huge floating diamonds, which, of course, is a scene we all remember from the film – don't we? It was also damned difficult, perhaps in a bid to disguise the lack of any genuine challenge.

Around the same time, a couple of PC text adventures appeared from Mindscape. A View to a Kill (1984) and Goldfinger (1985) both cast you as Bond and recreated the events seen in the films. The better of the two games was Goldfinger, as this was closer to the original story (A View to a Kill always felt rushed, missing out parts of the movie entirely). The games both featured a string of action scenes in which you had to take the correct course of action in a specified number of moves before the time was up. The story telling was generally atmospheric and well written, but most people found the struggle with the recognised commands and grammar more threatening than any world-dominating megalomaniac.



Domark of the devil

A View to a Kill was better bought to life by Domark in 1985. Appearing on the Spectrum, C64, Amstrad, and MSX, this was a sure-fire sign of things to come, as it didn't focus on a single game type, and instead took the more exotic approach of throwing in several formats of play. Again, based directly on the film, the title was an attempt to recreate the spectacle of the silver screen. Play was spread over three sections: the Paris parachute chase; inside the burning city hall; and finally, the mine. Each section had a distinctly different form. Paris was a top-down driving game that had a rather nifty first-person view and saw you racing around the city, chasing down Mayday. In fact, this was perhaps the most remembered section, mainly due to the amazingly poor level of programming behind it. It was almost impossible to complete as it was riddled with collision-detection bugs that saw your car drive through buildings and across water. The city-hall section was an item-collecting affair in which you had to escape the building by using items to advance, all the time keeping an eye on the fire spreading through the structure. The final mine section was a side-on platform game that also had item-based puzzle elements. You had to run, jump and climb around the mine, grabbing items and avoiding pits. Comically though, you could actually fall down a huge 100-foot pit (while spinning off walls!), and Bond would simply shake his head and get up! Well, he *is* Bond, so who are we to argue?

At the time, A View to a Kill was mind-blowing stuff, and the mix of game types and recreation of scenes from the film was enough to make many fans happy. Special mention should go to the animation of Bond in the mine level – impressive work for games way back when. After the success of A View to a Kill, Domark had the touch of Goldfinger himself and set about sealing the 007 licence in its vaults. The company knew it had a veritable goldmine and did everything it could to increase its coffers using it. The stage was set for a barrage of Bond.

Royal Dalton

Timothy Dalton and The Living Daylights (1987; Spectrum, C64, Amstrad, Amiga, BBC) was the next Bond game to emerge from Domark's Q labs. Instead of the multiple game types of A View to a Kill, this was a singular affair that possessed a running, jumping and rolling Bond, with some seriously tough side-scrolling action. Enemies would pop-up, shooting-gallery style from behind rocks and trees, and you'd have to avoid their fire before switching to an aiming

>The Man with the Golden Gunn

As far as retro classics go, there's one title that most people instantly recognise, even if they only hear it. With the Peter Gunn theme tune banging out in the background, Spyhunter (1983) had a definite identity, but this wasn't originally going to be the case.

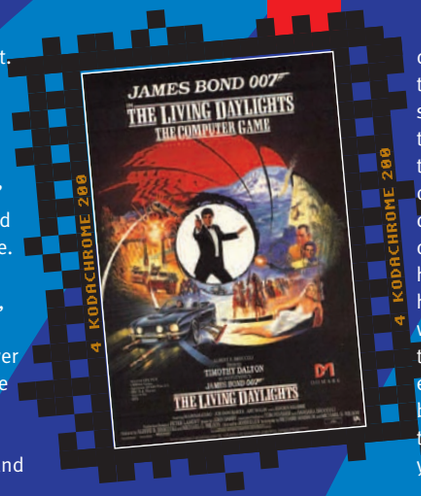
The game was originally planned as a James Bond title, and was heavily influenced by chase scenes seen in the movies. The transforming car loaded up with weapons was also a major giveaway, as was the mixture of land and sea fighting. Unfortunately, licensing such a huge name as James Bond doesn't come cheap. The simple truth is that after development costs, Midway didn't have the cash to bag the licence and had to drop the Bond theme and name. Instead, the game was entitled Spyhunter and the Peter Gunn theme tune became the backing track we all know and love.

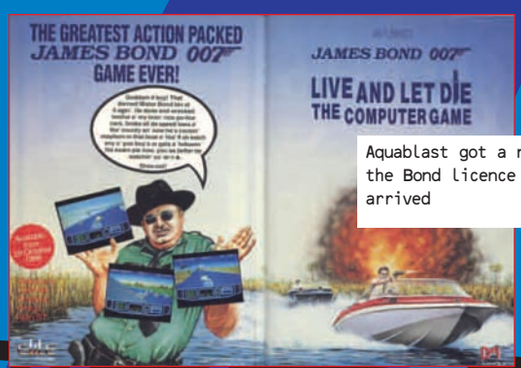
Spyhunter was originally planned as a Bond game

Funnily enough, this was the best thing that could have happened to Midway, as instead of becoming just another Bond game consigned to the gaming history books, it became a legend in its own right and has spawned many clones over the years. Of course, Midway has also revived the name with two full 3D remakes on the PS2.

mode in order to take them out. This was perhaps the most enjoyable Bond game yet, and the graphics were a great improvement over the previous titles. But, let's face it, good ol' Timothy Dalton just wasn't Bond was he? The fans wanted Moore.

Live and Let Die (1988; Spectrum, C64, Amstrad, Amiga, Atari ST) is one of the greatest examples of a cash-in you're ever likely to see. Developed by Elite and published by Domark, this tie-in was based wholly on the boat-racing antics of the film, and packed in plenty of racing, shooting and jumping off logs. It also included other memorable elements from the movie, such as the scorching chase through the pyramids of Egypt, the perilous battle in the Arctic and boats dropping huge mine fields in their wake... erm, hold on a minute, did we miss something? Overall, the game bore very little similarity to the film, aside from the boats of course. In fact, it turns out that Elite were working on a speedboat racing game called Aquablast when Domark came knocking, Bond licence in hand. You can guess what happened next. Those familiar with Buggy Boy, another Elite title, should recognise many elements. Simply bring in the boats, slap on a picture of that tobacco-spitting sheriff, and Bob's your uncle – instant movie tie-in!





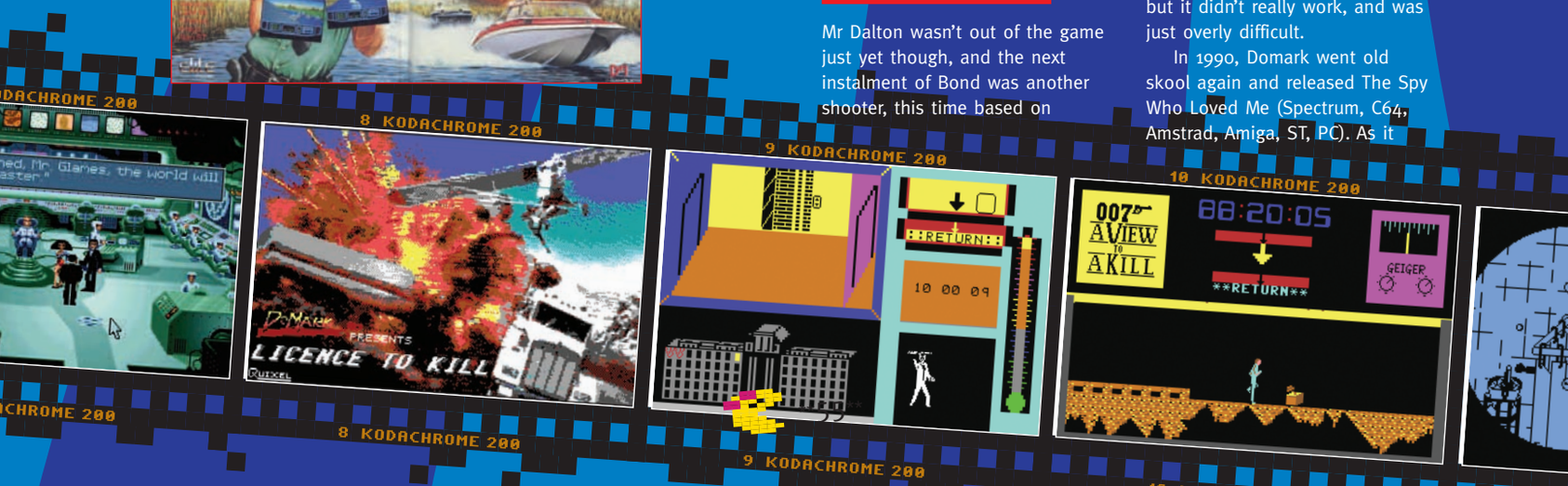
Aquablast got a name change when the Bond licence to thrill arrived

Despite the blatant cash funnelling on the go, Live and Let Die was enjoyable enough, and even on the Spectrum, it had some impressive 3D trickery. In your boat, you had to surge up the ever-expanding rivers, blasting enemy boats and jumping over a collection of obstacles. Once again, the challenge was very stiff indeed, but this was perhaps the best Bond game yet.

Licence to sell

Mr Dalton wasn't out of the game just yet though, and the next instalment of Bond was another shooter, this time based on Licence to Kill (1989; Spectrum, C64, Amstrad, Amiga, ST, PC). Taking control of Timothy, you piloted helicopters, drove cars, and shot bad guys in a vertically scrolling world. There was nothing new here, but the graphics were spot on. Some versions of this game were better than others though. In this regard, the Spectrum version springs to mind as being one of the worst. Enemy targets were lost amid the overly detailed levels, and you couldn't see what you were supposed to be shooting. You could also crash into buildings very easily, even though you were in a helicopter and could potentially fly higher. This smacked of hurried design – a blight that would continue to affect the movie tie-in world. The on-foot sections of the game differed from the vehicle levels and featured a very odd control system that involved aiming at enemies with a crosshair that you had to rotate in the right direction. This was an attempt to create something a little different, but it didn't really work, and was just overly difficult.

In 1990, Domark went old skool again and released The Spy Who Loved Me (Spectrum, C64, Amstrad, Amiga, ST, PC). As it



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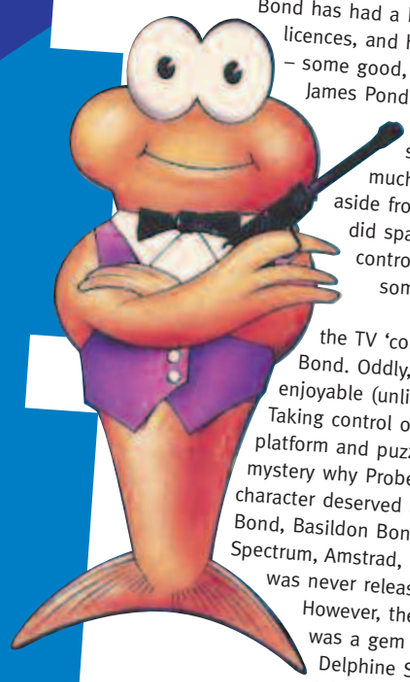
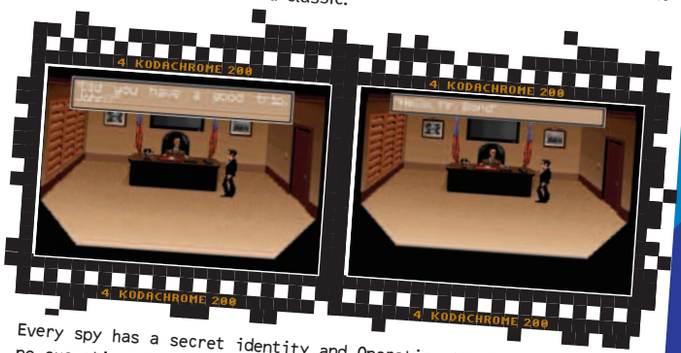


Bond has had a bigger impact in games than just official licences, and has spawned many clones and wannabes – some good, some bad. One of the best has to be James Pond by Millennium (1990; Amiga, Atari ST). Casting a goldfish as an underwater secret agent, the game didn't really have much to do with any of the Bond movies, aside from some names and references. But, it did spawn two sequels of its own, and controlling a secret agent goldfish is something you just have to do.

Another Bond-related title was that of the TV 'comic' Russ Abbot's character, Basildon Bond. Oddly, this game that was surprisingly enjoyable (unlike the original TV performance). Taking control of the bungling spy, you had to platform and puzzle-solve your way to glory. It's still a mystery why Probe Software thought that Abbot's character deserved a game, though. The Adventures of Bond, Basildon Bond (1986) was advertised for the Spectrum, Amstrad, and C64, but the Spectrum version was never released.

However, the strangest of all the Bond wannabes was a gem of a title called Operation Stealth by Delphine Software (1990; Amiga, Atari ST, PC). This was a point-and-click adventure in the style of Monkey Island, which placed you in the role of John Glames – a secret agent on the trail of a missing stealth fighter. Just like Bond, he had gadgets, a nice suit and a weakness for women. Throughout the adventure, you had to solve devious puzzles, tackle some difficult action scenes and make use of your Bond-like charm. It also had a very cool intro that was amazingly cinematic at the time.

"But, hold on!" We hear you cry, "this *was* a Bond game wasn't it?" Well, yes, and no. It depends on where you live. In the US, Operation Stealth appeared as James Bond: The Stealth Affair, but here in good ol' Blighty, we knew it as Operation Stealth. This was mainly for licensing reasons. Operation Stealth was released here, but Interplay, the game's publisher, managed to bag the James Bond licence for the US release. This caused a few problems for the story, as it saw Bond ditching Her Majesty's Secret Service in favour of the CIA! Good one James! The big name didn't improve that game's sales though, and it remains an unappreciated classic.



Every spy has a secret identity and Operation Stealth's star was no exception. In the UK, he was Glames, and in the US, he was Bond

seemed vertical scrolling was the thing to do in Bond games, you once again jumped into the ever-present Bondmobile and burned rubber towards the top of the screen. This time though, the game was a little different, and shared more than a little similarity to Bond-a-like arcade classic Spyhunter (which was actually inspired by the chase scene from the The Spy Who Loved Me movie – crazy). In order to get to those lovely lasses and extra drys, you had to drive along an ever-winding road, avoiding enemies, oil slicks, rocks and the scenery in general. You also had to collect tokens and equipment for later levels. Despite a simple-sounding formula, this was a very addictive game, and although it was sometimes unfairly difficult (evil placement of oil slicks being a major killer), you couldn't help but play it over and over again, trying to get just that little bit further.

From Slovakia with Love

With the huge growth in console popularity and sales, the '90s were dominated by the likes of Sega and Nintendo. The Master System, NES, Megadrive and SNES took over from the home computers of yesteryear, and games moved on. This didn't mean the end of Bond games though. Oh no. Perhaps the most obscure Bond game of all was still to arrive. Octopussy (1991; Spectrum), from Slovakian developer Ultrasoft, was a very bizarre title that had a rather weird intro involving some disembodied arms wrapping around James, trying to emulate the movie's poster. The game attempted to push the envelope in Bond games that bit further once again, but took inspiration from previous instalments. The game itself was very similar in style to the city-hall section found in A View to a Kill and had the same item-finding gameplay. Graphically, it was an impressive title, and even though the intro scene was odd, it did look great and really tried to capture every element from the film in detail. Octopussy was never released in the UK (indeed, it was never translated into English), making it

While it tried to emulate the movie poster, the intro to Octopussy was very strange indeed

something of a rarity.

The last appearance of Timothy Dalton in the Bond-game universe was in James Bond: The Duel (1991; Master System, Megadrive). Very similar to the Rolling Thunder games, it took the form of a side-scrolling platform shooter in which you battled against a whole host of Bond's most notorious villains, including Jaws, the metal-toothed monster. In each level, while capping bad guys and ridding the world of scum, you also had to rescue hostages, usually tied-up women – well, it is Bond after all. The Duel wasn't a particularly well-received game, mainly due to a flawed control system.

NES and SNES owners got a little extra bit of Bondage a with title that could only appear on a Nintendo console. Based on a the animated TV series, THQ's James Bond Jr (1992) saw you travelling the world as a pre-pubescent Bond, seeking out and dealing with agents of the amusingly named S.C.U.M and villains such as Dr Deranged and Maximillian Cortex (where do they think up these names?). Metroid-style platform action was the theme of the day, and the graphics (especially for the NES) were quite impressive. Alas, 007 aged seven didn't really make it into people's hearts, and this became his first and last mission.

Well done Rare

Things then went rather quiet for Bond during the first half of the 90s, and we didn't see any new arrivals for quite some time. This applied to both the games and the films, but it wasn't to last too long. The Megadrive and SNES had a full and fruitful existence, giving us classic after classic, but eventually, they were both consigned to the gaming graveyard. A new breed emerged from the East, and the Nintendo 64 brought with it new power and new promise. The machine itself was something of a let-down, and didn't have enough good games to keep it going for long, but the good games it did have were all 24-carat, solid-gold classics, especially in the case of a certain secret agent...

The arrival of Pierce Brosnan as 007 heralded a new age for Bond, and GoldenEye, the first film after the series' break, brought with it one of the best games of all time. The game's developer, Rare, immediately rose to fame after releasing GoldenEye (1997) on the Nintendo 64, and was quickly heralded as a coding giant again, 10 years on from Ultimate Play the Game. GoldenEye was the first FPS title that actually worked on console and was enough to finally give the PC a run for its money. The ultra-slick controls, superb graphics and unparalleled design were quite simply awesome.

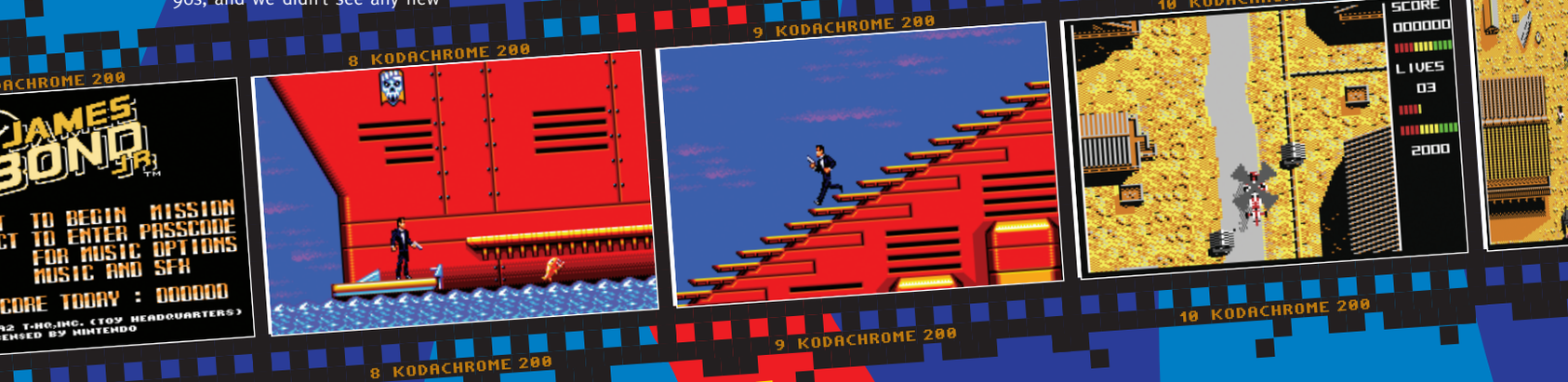
Beginning with Bond jumping from the top of a dam, you took control of our hero from his point of view, and had full access to his trusty Walther PPK, multi-functional watch and all manner of other weapons and items. The game was huge, and involved levels set in such places as embassies, Arctic research stations, moving trains, chemical plants and secret underground bases – all trademark Bond. You even got the chance to drive a tank! Things didn't stop at the single player either, as multi-player was also on the menu. If you plugged in four controllers, you could have a four-way deathmatch with your mates, all with the same slick play as the main game.

A surprising appearance on the GameBoy around the same time as GoldenEye, was the simply titled James Bond 007 (1997). This was a strangely Zelda-esque title that had you running around the screen talking to NPCs, helping with often mundane problems (fixing people's bikes for example, just like any good secret agent...) and fighting evil doers. We suspect that the game was originally planned as a stand-alone RPG affair, but was blessed with the James Bond licence late in development and the graphics were made to fit in with this deal, as the game just doesn't feel like a Bond title.

Farewell, Mr Bond

So, at the end of our Bond tour, it's the arrival of GoldenEye that really set the standard for future 007 games, and more licences featuring the same FPS formula (although none quite as good) have since followed. Generic titles, such as Agent Under Fire, NightFire and Everything or Nothing, all PS2, Xbox and GameCube blockbusters, have been published by sequel-mongers Electronic Arts. In addition, EA has snapped up the licence to all 20 Bond movies, so expect many more tie-ins to appear in the future. James Bond *will* return.

RG*



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>Fantastic Dizzy

A scrambled mess or a stroke of genius? **David Crookes** tells the full story of an egg which revolutionised the video gaming world - and the two guys who helped it happen

Lara Croft can explore vast three-dimensional worlds, shooting primordial beasts and foreign criminals, but when it comes to seriously shaking things up, nothing could have beaten an egg-shaped character called Dizzy. Where Lara is lifelike and athletic but simply plays up to adolescent sex appeal, and Sega's Sonic the Hedgehog rolled quickly around the place but did very little else, Dizzy was out there grafting. He walked for miles in pursuit of his goals. He would do anything to defeat his arch-enemy, the Evil Wizard Zaks. And he would bounce and bumble his way through screen after screen in pursuit of his one true love, orange-haired Daisy.

Dizzy was a phenomenon. The walking, talking egg starred in a whole range of games spanning a multitude of genres, and he also allowed computer journalists in the 1980s and early 1990s to come up with a whole host of yolk jokes – how egg-citing was that?

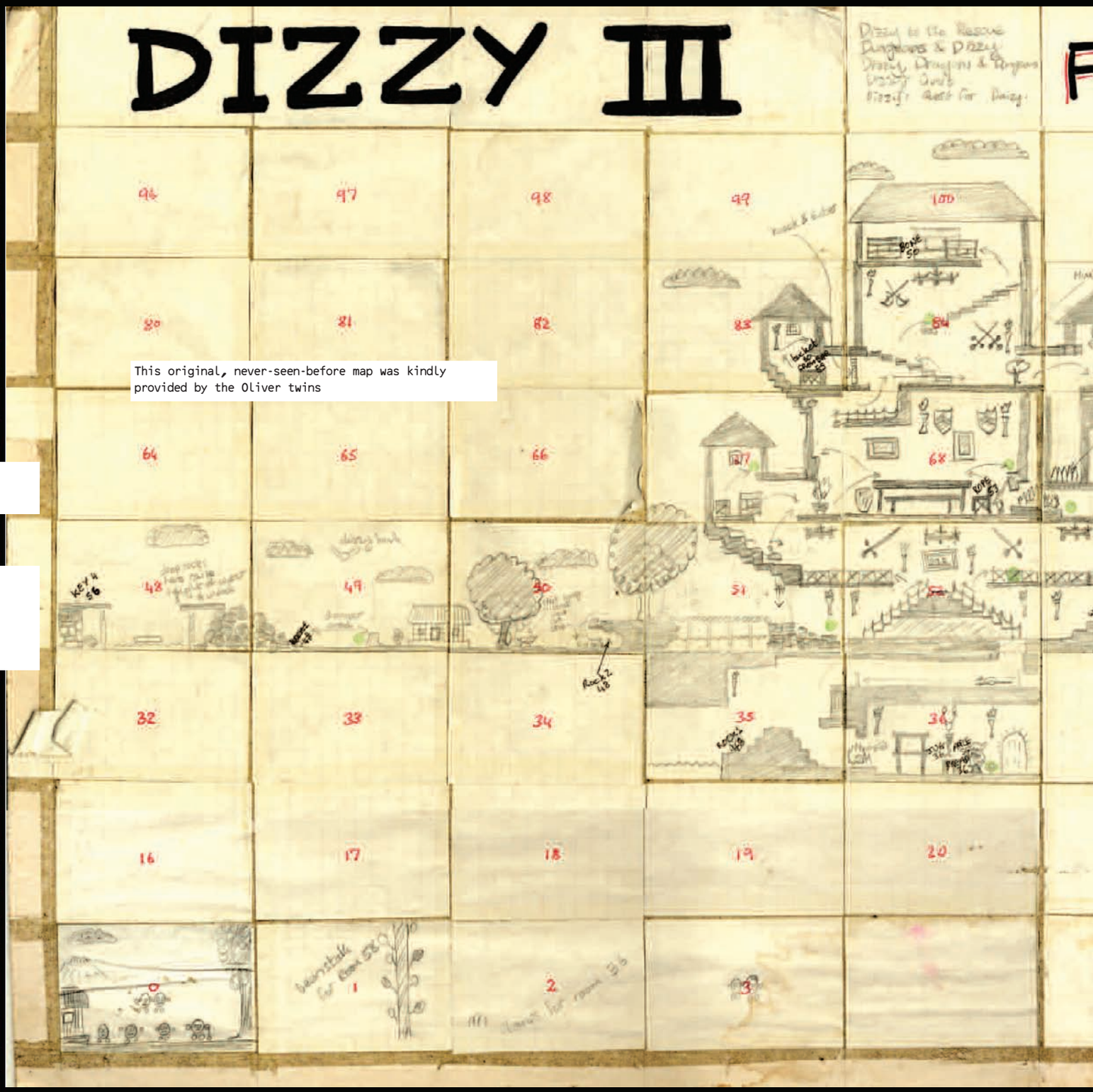
There were some detractors who believed all the Dizzy games to be the same. Codemasters were accused of creating easily solvable games and some even compared them to the identikit pop churned out by Stock, Aitken and Waterman. They believed the series was a triumph of marketing over substance. Others, however, snapped them up. The games were accessible and easy-to-play. Dizzy's weaknesses turned out to be the series' strengths; the lack of opportunities for death, which some reviewers argued took away elements of surprise or challenge, meant players could just keep going, concentrating on solving puzzles. That the problems were too easy at times meant people played to the end and didn't get fed up, choosing to buy the next in the series when it arrived. And

the overall familiarity, rather than breeding contempt, meant people knew what they were getting before waiting what seemed like hours loading the game up. So whether or not they were like a latter day Westlife – coming out regularly, being pretty much the same yet selling in bucketloads, and with not many people actually admitting to loving them – seemed not to matter.

The character was born in 1987, the brainchild of Andrew and Philip Oliver. Two years earlier, the pair had graduated from Clarendon School in Trowbridge and were on course to go to university. Instead, they decided to put together a business plan and take a year out.

Not the first

They had already worked on many computer games for the 8-bit market, spending hours programming on their Spectrum. Their first published titles, Black Box and Gambit, were released on the BBC Model B, and by 1985 they had produced another 10 games for the format, plus titles for the Amstrad CPC. Taking a year out was, therefore, not such a huge gamble. And it certainly paid off. They convinced their



This original, never-seen-before map was kindly provided by the Oliver twins

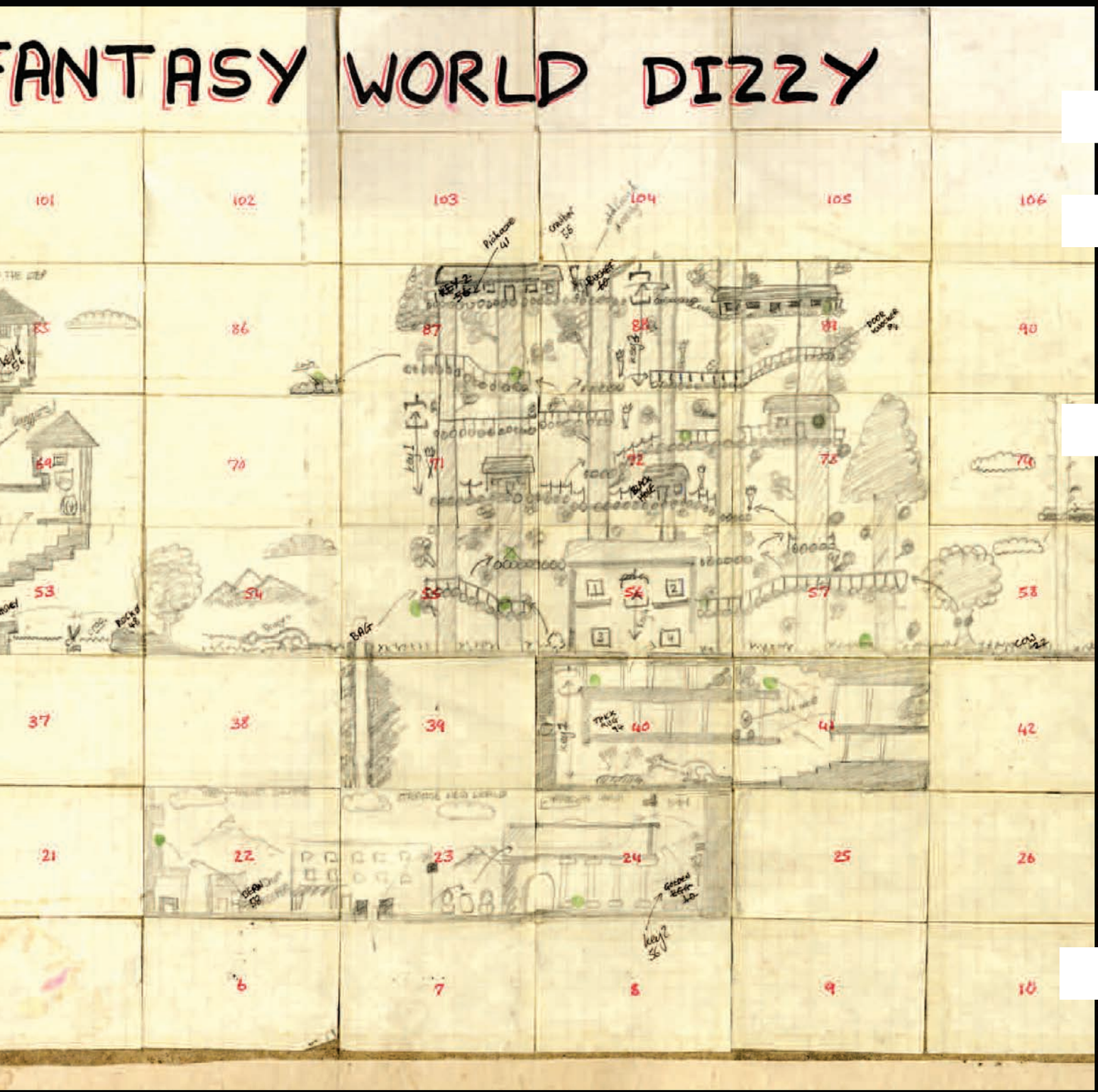
parents of the merit of pursuing their business plan and went on to become one of the most successful double acts of video gaming history.

But it was not until their chance meeting with Codemasters' Richard and David Darling that their fledgling company began to really take off. In 1985, the Oliver twins went to the European Computer Trade Show where they bumped into the Darlings. Richard and David were hugely impressed by the Olivers' talents and asked them to produce Super Robin Hood for the CPC. From that point on, the twins continued to write a host of games, most of which featured the word 'simulator' in the title.

Easy going

The Olivers found programming such games relatively easy since they were only asked to translate a sport across onto the computer rather than come up with something original.

As Codemasters' most prolific programmers, however, the Olivers were able to break free from the restraints of sports simulation games and decided to go for something new and



creative. They came up with a game of exploration and puzzle-solving. At the centre of that was a giant egg. Philip said: "What we most wanted out of Dizzy was to develop a character, which isn't easy when you're dealing with sprites. We felt the best way to achieve this was to make his head as big as possible so we ended up making him into an egg shape. It was also easy to draw."

Dizzy hit the shelves in September 1987. By then, Codemasters was well-established as an 8-bit budget software house, selling games for just £1.99. Sales of the game, with its simple graphics and sometimes mind-boggling array of puzzles, were average for a Codemasters title. What set Dizzy apart from most other games was that the sales were constant and showed little sign of dropping off. It prompted both the Darlings and the Olivers to get their heads together about producing the second in the series.

Sequels and spin-offs

Rather than follow the process of their previous offerings where, for

example, Grand Prix's sequel became Grand Prix 2, the Olivers decided not to go for Dizzy 2 but to name the second title, Treasure Island Dizzy in a bid to give each game a distinct identity – much like the Indiana Jones and James Bond films. The game outsold the first offering without actually affecting sales of the first game. Both the Olivers and the Darlings were surprised. Andrew said: "We first came up with Dizzy because we wanted to produce an adventure game. Something with more depth to the experience than anything we'd played before and with a good story behind it. Yet we were gobsmacked by the popularity of the character. It was a game we really wanted to do, so in retrospect it's no surprise that other people took to it as well. But at the time we were amazed. We just had to produce a third when the second did so well."

Spin-off games were also created. The first, Fast Food, was a clone of Pac-Man and saw Dizzy running around a maze munching on burgers while avoiding capture. It was the first time the egg was placed out of his adventure settings and aimed to establish the character as focal point for video game players who did not necessarily enjoy adventuring. But the adventure games remained the Olivers' favourite creations. Their third such game, Fantasy World Dizzy was the best yet – huge and absorbing, it introduced Dizzy's family and became a talking point in playgrounds up and down Britain. How did you stop the dinosaur from scrambling the egg? What did you have to do to get past the guard on the first screen?

Andrew said: "Fantasy World Dizzy was our favourite title of the series, there's no question about it, because so many things went right for that game. It was the third Dizzy title and we completed it in just one month. We knew what we wanted from the start, introducing all the new characters and the whole project gelled together nicely. Even down to the box art, which was great.

"This was also the last Dizzy game done by just the two of us before other people started getting involved so it's quite special because of that, and it also sold more than any other Dizzy game."

Each character had its own quirks and personality. Dylan was laid back and something of a hippy, Daisy was the typical old movie-style damsel in distress, Denzil was cool and into his music, and Grand Dizzy was old, wise and a bit of a moaner.

Perfect puzzles

The games were created to appeal across the market, from children to adults. The kids were taken in by the cute factor and the parents by the sometimes frustrating brain power needed to progress through the magical kingdoms. The playground chat helped to cement the character in the nation's conscience – for the more children were discussing the problems they were trying to overcome, the more people were going out to see for themselves what all the fuss was about.

But who devised these puzzles? Philip said: "We both had a hand in them. We'd have the same ideas all the time and it was always just a case of which one of us said it first. There weren't really any brotherly battles about the direction of the games. It might be because we're twins but we have always been very much in tune with one another in what we want to do with our games. This might have given us an edge over any of our competitors because we had double the creative input of anybody else."

For their final solo Dizzy game, they put in all of their efforts into creating a massive world for the egg to explore. Memory was tight with the games having to fit into just 48K of memory on some computers. The Olivers got out their pencils and began to sketch out a massive plan of what they wanted to see, then set about trying to translate as much of it on screen as possible. Philip said: "It wasn't really all that hard to create massive games with such small computer memory. We simply built the game until we couldn't

Dizzy makes the giant leap from

build anymore. A lot of the assets were already in place from earlier Dizzy games such as the code, audio and a lot of the graphics.

"Basically we came up with a massive plan which was all sketched out and started building levels. When we did run out of memory we just had to make the decision over which screens to sacrifice. Not that many had to go in the end though, except for a dock area which we planned for but never made it. This went into Fantastic Dizzy so it wasn't wasted."

Passing the baton

Big Red Software took over from the Olivers for number four in the series. They kicked off their rein with Magicland Dizzy, a great game that had improved graphics and sound, but the same, familiar gameplay was all there. Zaks once again returned from the grave, Daisy was kidnapped and there was a nice big castle to explore. Although losing a little of the Oliver magic, handing Dizzy over to Big Red didn't do him any harm at all and he went from strength-to-strength, moving onto other formats such as the NES and the Megadrive.

The next game, Spellbound Dizzy, was so large – 100 screens, in fact – that Codemasters set up four separate four-minute phone helplines. For the first time, Dizzy was able to swim underwater and ride around in mine carts. Some people didn't like the added elements but it was certainly an ambitious project – and Codemasters must have raked in the cash on the phonelines.

Despite the incredible money-making success of Dizzy, Codemasters did not put pressure on the makers. There was spin-off merchandise with everything from teddy bears to trading cards all flogged to eager punters, but the creative programmers were left alone to devise new worlds and new ideas. Philip said: "We had a great relationship with Codemasters as they helped us start up in the games industry. It wasn't anything like producing a game a year – it was more like we knocked them out as quick as we could and they took them all off our hands. At one point we were creating 50% of Codemasters' games so it was a fruitful relationship for us all."

In 1992, Codemasters entered discussions with animation experts Hanna-Barbera with the view to producing a Dizzy television cartoon series.The US giant didn't believe the character was big enough world-wide, though, and the idea didn't progress, despite United Artists also showing an interest. That didn't stop Dizzy making the step onto the consoles. The first game to be created for NES and

Dizzy spin-offs

Fast Food (1989, Spectrum, C64, Amstrad CPC, Atari ST, Amiga)

This was the first spin-off for Dizzy and was apparently going to be called Happy Eater, after the roadside chain of restaurants. The eatery was to sponsor the game but the deal fell through. Despite that, the fast food element remained in this Pac-Man style game. Dizzy went around munching burgers and shakes while avoiding the ghosts.

Kwik Snax (1990, Spectrum, C64, Amstrad CPC, Atari ST, Amiga)

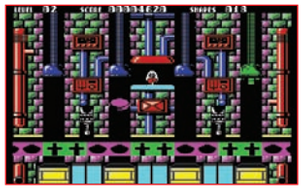
A fun arcade game which had colourful graphics and fast-paced action. The idea was to squash the Evil Wizard Zaks' henchmen with blocks, while collecting fruit. When that was complete, Zaks' spell over the Yolkfolk was broken. Dizzy looked frankly bizarre and appeared as if he had been thrown in at the last minute. In 1993, Codemasters updated Kwik Snax and released it on the NES and Game Gear as Go! Dizzy! Go! It could be played alone or with a friend – taking on the role of Denzil – which made it all the more fun because you could compete in battles for the most fruit.

Bubble Dizzy (1991, Spectrum, C64, Amstrad CPC, Atari ST, Amiga, PC)

Dizzy got into another scrape, this time doing something as innocuous as taking a leisurely sea journey to visit girlfriend, Daisy. He inadvertently found himself on a pirate ship and was made to walk the plank. The aim of the game was to get him back to the surface by standing on bubbles and leaping from ledge-to-ledge, picking up pearls along the way. It was a good-looking game and considerably more fun than the other Dizzy spin-offs.

Dizzy Panic (1991, Spectrum, C64, Amstrad CPC, Game Gear)

A very difficult, frustrating yet enjoyable game, this had the player using his or her hand-eye co-ordination skills to the max. A series of four tubes dropped different shapes towards the ground. A conveyor belt at the bottom of the screen had holes to correspond with the shapes and the player had to position the strip with the correct hole underneath the shape which matched it. The tubes got lower each time and split-second reactions were needed as the action got faster. Once again, Dizzy just seemed to have been tagged into the game and served no real purpose.



Megadrive was The Fantastic Adventures of Dizzy, which won Best Graphic Adventure of the Year at a US video games awards show. Yet at the time, Codemasters wasn't even licensed to produce Nintendo games and had a very tough job getting the game into the shops and reviewed in magazines.

A fond farewell

A few more games followed on the consoles as Dizzy bid farewell to the 8-bit home computers, but then the phenomenon ended and production ceased. Dizzy, it seems, had had his day despite the support from fans. Andrew said: "Fan mail came by the truckload. Not literally, but there was a lot of it, and we still get emails about Dizzy today all these years later. We'd like to think Dizzy was the Mario, Sonic or Lara Croft of its day. He was the first game character to actually have any pesonality and really started to show how loveable game characters could be. It's probably because he was the first character like this that he still has such a wide fan base today, even though there haven't been any new games."

Philip and Andrew Oliver now run Blitz Games. They had broken away from Codemasters to form Interactive Studios and the development house produced a number of hits including Judge Dredd and Theme Park. Interactive's first original game was Firo and Kla for PC and PlayStation, and it helped them break into the next-generation market. Interactive is now Blitz and has around 100 staff members knocking out games such as Action Man and Chicken Run. But the Oliver twins continue to recognise their roots. Their website contains a Dizzy section – as well as a dedicated site to a next-gen Dizzy (**www.fantasticdizzy.co.uk**), complete with a petition to push for the egg's return (over 1,500 names to date). The new Dizzy looks spectacular but the Olivers say no decision has been made on whether to revive the series. Andrew said: "We've been asked so many times whether or not Dizzy ever will make a comeback and the answer is we just don't know.

"Never say never."

Dizzy Down the Rapids (1991, Spectrum, C64, Amstrad CPC, Atari ST, Amiga)

A Toobin' clone where the player took on the role of either Dizzy or Daisy and floated – slowly – downstream in a barrel, avoiding all manner of creatures and objects. The loved-up heroes could kill the bad guys by lobbing apples at them. Like all Dizzy games, the graphics were nice and colourful, but there was little challenge and it quickly became boring.

Magazine versions

Special versions of Dizzy games were covermounted on various magazines, including Crash, Your Sinclair and Amiga Power. To promote the release of Fantasy World Dizzy, special versions of Dizzy and Treasure Island Dizzy appeared on Crash issues 65 (June 1989) and 72 (January 1990) respectively. These were basically smaller versions of the original games containing adverts for other Codemasters titles. A variant of the first game also appeared on Your Sinclair issue 52 (April 1990).

However, Crash issue 84 (January 1991) included an ever better bonus. As the title suggests, Dizzy 3 and a Half was a new adventure that bridged the gap between Fantasy World Dizzy and Magicland Dizzy. The aim was to get Dizzy to Magicland using a teleporter. The game was only five screens big and very easy to complete, but it was a nice addition to the series nonetheless.

Other magazine giveaways included an Easter-themed version of Fast Food on both Amiga Action and ST Action. The game was titled Easter Eggstravaganza and you had to run around mazes collecting Easter eggs. Finally, a one-level preview of Fantastic Dizzy called Christmas Dizzy appeared on Amiga Power magazine.

Dizzy adventures

Dizzy (1987, Spectrum, C64, Amstrad CPC)

The original game was fresh and innovative, but when compared to Fantasy World Dizzy, Magic Land Dizzy or any of the later offerings, it appears quite dated. It was also quite a small game. Nevertheless, it was the one which started the ball rolling and introduced one of history's best-loved computer game characters. The object of the game was to kill the Evil Wizard Zaks. Unfortunately for Dizzy, in later episodes of the game, the pointed-hat one came back to haunt him.

Treasure Island Dizzy (1988, Spectrum, C64, Amstrad CPC, Atari ST, Amiga, PC, NES)

By this stage, things were improving. Gamers had to get Dizzy off a desert island where he had become stranded. It had probably the best Dizzy plot but the graphics were still pretty much the same – the Spectrum offered little in the way of flair and Amstrad owners had to make do with a straight Spectrum port. Still, it was a fine little game that built on the original. Note that the NES version did not appear until 1991.

Fantasy World Dizzy (1989, Spectrum, C64, Amstrad CPC, Atari ST, Amiga, PC)

The best game of all the adventures, and the first of a new-generation of Dizzy titles (also the last from the Oliver Twins). Dizzy braved the wrath of the king's trolls as he set out to rescue Daisy. This time all his pals were with him – the infamous Yolkfolk – from Denzil and Dylan to Dozy and Grand Dizzy, spread out over 50 rooms. The plot may have been familiar but the game was top notch with a perfect blend of action and puzzles. Brilliant!

Magicland Dizzy (1990, Spectrum, C64, Amstrad CPC, Atari ST, Amiga, PC)

Dizzy's Yolkfolk were in danger yet again as the Evil Wizard Zaks decided to transport them into fairytale worlds. Daisy was trapped by Zaks, Dora was turned into a frog and Dozy was put to sleep. The puzzles kept coming and coming in this offering as Dizzy attempted to find the enchanted sword Excalibar and brave the wizard's island to save his pals – oh, and finish Zaks off once and for all. This was perhaps the most difficult game in the series, mainly due to a series of tricky jumping challenges. Anyone remember trying to cross the volcano?

Spellbound Dizzy (1991, Spectrum, C64, Amstrad CPC, Atari ST, Amiga, PC)

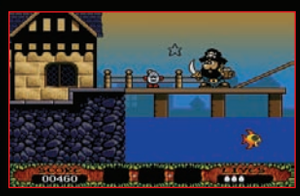
The largest Dizzy game to appear on the 8-bit machines, Spellbound had a staggering 100 screens. Dizzy managed to transport his egg-friends and Wizard Theo to the underworld after he read a spell from one of the wizard's books. Dizzy had to collect five stars and a special object to get him and the Yolkfolk back home. It was an absorbing game but it lacked some of the charm seen in previous games. However, the sheer size of the game meant it could take weeks to complete.

Dizzy - Prince of the Yolkfolk (1991, Spectrum, C64, Amstrad CPC, Atari ST, Amiga, PC)

This was by far the shortest Dizzy game – just 30 screens, seemingly aimed at younger gamers. It sometimes felt as though it had been knocked out in an afternoon, and could certainly be completed in one. Dizzy was put in prison by Rockwart the troll who threatened to overrun the King's castle. Meanwhile, Daisy was put in a 100-year sleep. Originally the game was only available as part of the Dizzy's Excellent Adventures pack, a compilation also featuring Dizzy Panic, Dizzy Down the Rapids, Kwik Snax and Spellbound Dizzy.

The Fantastic Adventures of Dizzy (1991, NES, Megadrive, Master System, Game Gear, Atari ST, Amiga, PC)

The Fantastic Adventures of Dizzy was the first time the character had appeared on the consoles (it was called Fantastic Dizzy on some machines). After selling over 3 million copies on other formats, it was time he made the leap and in 1991 Dizzy did just that. As with the other games, Daisy was kidnapped and Dizzy had to save her (he really must have been getting something good). This game took bits from all the other offerings and created something that was new to console players. The graphics were simply amazing.



Crystal Kingdom Dizzy (1992, Spectrum, C64, Amstrad CPC, Atari ST, Amiga, PC)

Unlike some of the previous games, this one was sometimes a little too easy. Many of the puzzles were along the lines of finding a screwdriver for Denzil when he said he has lost his tools – but mixed in were some truly obscure conundrums which, after a bout of trial and error, left you thinking 'What?'. In this instalment, the ancient treasures of Zeffer had gone missing and the player had to find it by exploring four worlds. It was the first game to step out of the budget bracket, and while the size of the game reflected the full-price tag, the time it took to complete did not.

RG*

>PIECES OF 8-BIT

The first in a regular series of retro collecting features covers the ever-popular 8-bit market. Whether you're looking to build a personal collection or want to make a tidy profit through trading, Richard Burton reveals everything you need to know...

Got an innermost urge to return to the 1980s and buy up all the things that symbolised your youth? Whether that's Star Wars figures, a Raleigh Chopper or every ZX Spectrum game ever released, you are certainly not alone my friends.

Retro game collecting is undeniably on the rise but why? Some may see it as an opportunity to have everything they were denied when they were kids. Others might think it's potentially a good investment for the future. The majority, we suspect, are in it for the good time factor. The feeling of playing a game you once loved after almost 20 years, whilst beaming from ear to ear and nodding knowingly at the screen, is priceless.

No matter how many times you play on your PlayStation 2 or Xbox, you can never relive the feeling of waiting for software to load. And when we say waiting, we mean waiting, sometimes afraid to move, sometimes staring madly at the tape recorder as if this will ensure a successful load, sometimes mentally shouting "work" over and over again in your head like some rabid Uri Geller with a broken watch – and for what? To be eventually rewarded with the intro music to Manic Miner. That's electronic paradise that is, and you can beat it.

Then there's gameplay. Granted, there are always gaming atrocities on all formats of computer and consoles, so we can't say everything about vintage gaming is great. However, what retro gamers seem to find is that the quality of gameplay often makes up for the lack of graphical excellence. Fun, simplistic, one-more-go addictive gameplay at its best – whatever you call it, retro systems have it in abundance and that's probably the biggest single reason why people are returning to older systems and finding qualities that are seemingly so often lacking in the latest games. Whether you were a computer or console owner, we're sure you'll have a favourite game that you look upon more fondly than anything released today.

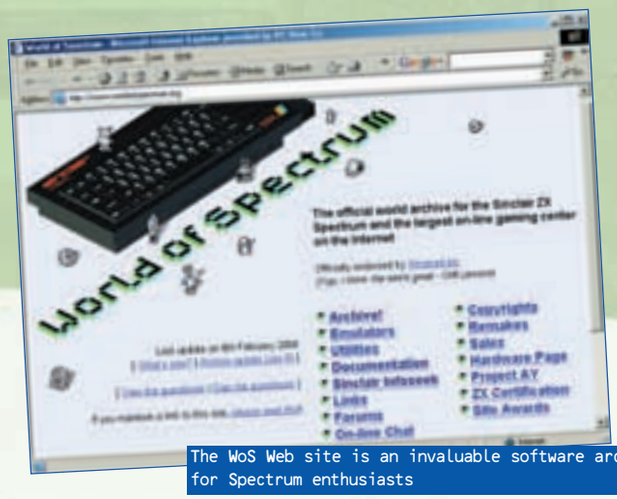
Hunt and gather

With a whole generation of late 20 to mid 30-somethings out there with a great deal more disposable income than they had when Space Dust and Big Trak were around, retro game collecting has taken off big time.

Take the Spectrum for instance. There are armies of collectors out there building substantial game collections. Their reasons and motivations may differ slightly but it all boils down to the need to get games – and lots of them. Many collectors are in it for the sole purpose of having as many original games as they can get their hands on. In the school yard, you had to live with tape-to-tape copies of Jet Set Willy with handwritten colour code sheets that took you six hours to copy. Today you can get a box full of original games for a couple of crisp 10 pound notes. Come on, who wouldn't want to have a spare room stuffed from wall to wall with classic games? Wonderful to look at, satisfying to ponder over.

For some, there is also the preservation element of the games to be considered. As the years go by, the magnetic tape in your cassettes will start to degrade. Eventually it will reach a point where it cannot be salvaged. Might that game be lost forever? Not if the preservers have anything to do with it. Web sites such as the impressive World Of Spectrum (**www.worldofspectrum.org**) are actively pursuing every single title released for that computer – a daunting task by anyone's standards. Not only that, the preserved version must also be a perfect copy of the original code, so there's no room for beautified, ripped or cracked versions by Eastern-Block hacker types here. Once preserved, the games are freely available for download to anyone who wants them, but only after the original copyright holder has given consent for its distribution. It's a retro gamer's dream, and certainly one of the best presented and most useful resources for the Spectrum anywhere on the Web.

For the Commodore 64 owners there is the superb Lemon 64 (**www.lemon64.com**), for Acorn fanatics the equally excellent Stairway To Hell (**www.stairwaytohell.com**) and for Amstrad owners there's CPC Zone (**http://cpczone.emuunlim.com**). All are run by dedicated enthusiasts and are certainly worth supporting.



The WoS Web site is an invaluable software archive for Spectrum enthusiasts

>Sourcing software

Generally, 90% of games for most 8-bit formats can be picked up for peanuts due to the large quantities released. By the same token, there are the games made by bedroom programmers, those individuals who've written a game, hand produced their own copies of it and even included the almost obligatory photocopied black and white inlay. There are not going to be many of those knocking about and the prices for the rare and obscure games are rising all the time.

So whether you're looking for a common classic or a rare obscurity, where is the best place to start? Car boot sales, house clearances, auction rooms and the like all used to be good places to find old computer systems and carrier bags full of games. At least, they certainly were until a few years ago. It seems the once fruitful car boot has become a barren and empty wasteland for the retro collector. There might be the occasional gem appearing from within a mound of second-hand pants and decapitated Barbie dolls, but certainly not the huge haul you were hoping for. People are realising that old computers and games are worth money and are selling them elsewhere. Please be up standing for the wonderful world of retro collecting Web sites.

Thankfully, the Internet has not only opened thousands of doors to new places of collecting, it has also brought collectors together from all over the world. Trading is as much a part of the scene as buying, if not more so. To find kindred spirits who are gagging for the complete range of Sinclair computers, or every single Oric Atmos game, or maybe even just a nice set of Ultimate games, is a very liberating experience. We are certainly not alone.

There are literally hundreds of Web sites catering for the retro collector with cash to spend. Some are your fellow collectors' homepages with a few duplicate games for sale, and then there's the larger Web sites with vast stocks of games for you to drool over. Here are a few of those larger sites that cover a wide range of old 8-bit formats:

http://retrogamer.merseyworld.com is run by Keith Ainsworth who not only has a huge amount of software titles available but also the knowledge to back it up. He also used to produce a small magazine entitled Retrogamer. That's a damn fine title for a magazine!

www.retrogames.co.uk is as diverse as they come. There's everything from MSX to Vectrex and most formats in between.

www.vintagecomputer.co.uk is another multi-format site which seems to have a little bit of everything, including hardware.

www.ukretro.co.uk is slightly different from other retro game selling sites as it almost solely deals with brand new games. You thought they weren't available? They are here, lots of them, and many are still shrink wrapped. If you've ever wanted to relive the feeling of peeling the cellophane wrapper off a brand new copy of Jet Set Willy – here's your opportunity!

www.sintech-shop.de/shop.htm is a German retro gaming site with a huge range of games. A little overpriced in some areas but still a good place to find that long lost favourite.

www.highstreetmicro.co.uk is varied site run by Tony Cank. There's a lot of games and a good mix of formats. There's even a reasonable Sam Coupe section.

Alan Cresswell at Ace Software is also worth contacting. No Web site unfortunately but he will send out software lists for various formats by email. He has a vast range of second-hand games and all are very reasonably priced. Alan can be contacted through aces@freeuk.com.

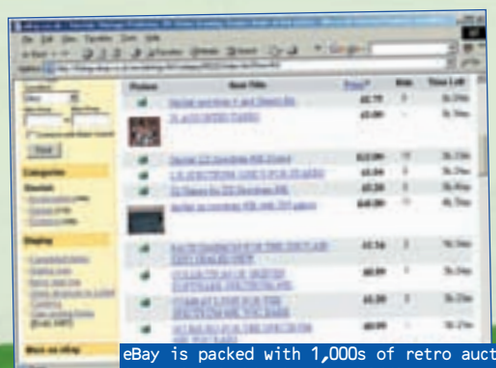
The online marketplace

Finally, we come to the online auction sites with their hotchpotch of anything and everything you could wish for. It's much like having the world's biggest car boot sale at your fingertips. eBay (**www.ebay.co.uk**), the biggest and most well known online auction site, is a retro collector's heaven.

If you're starting out on the collecting scene, this is one of the places you should visit first. It's an ideal place to pick up large bundles of games for a reasonable price, giving your collection a healthy kick start. Collectors, penniless students, little old ladies clearing their lofts – you'll find everyone rummaging around and flogging their old systems on the mighty eBay. Although they don't really have the quantities of retro gear that eBay has, QXL (**www.qxl.com**) and eBid (**www.ebid.co.uk**) are also worth a nose around.

You can potentially pick up some fantastic bargains on auction sites, and if you delve deep enough, there's a chance to bag the occasional rare and unusual item too. Unfortunately, you'll soon discover that finding an item and actually winning it are two completely different animals altogether. There's nothing quite as infuriating as being outbid for a much-wanted game in the last five seconds.

That's collecting for you though. If you've got your eye on something interesting or unusual, it's a safe bet that half a dozen other people are watching it too. Such is the nature of the beast.



eBay is packed with 1,000s of retro auctions, and the rarer items inevitably lead to bidding wars

The Ultimate collection

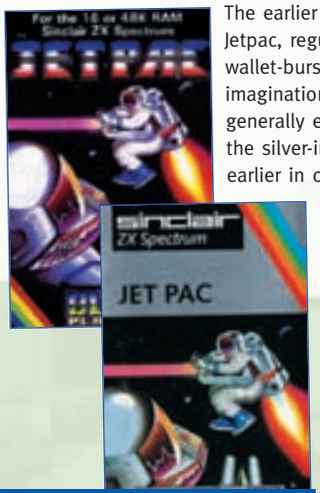
Without doubt, one of the most admired, most revered and most collectable software houses has to be the Ultimate: Play The Game. The company was formed by brothers Chris and Tim Stamper and was under the publishing name of Ashby Computers and Graphics Ltd. Straight from the off, the company showed what was possible with a humble 16K Spectrum with titles such as Jetpac and Cookie. As further games were released, the standard of each game progressively got better and better. Classics such as Sabre Wulf and then Knight Lore showed the computer-owning public what a machine could really do when pushed to the limit. Their games blew the competition away and took 8-bit gaming to a new level, and the gamers of the time loved them for it.

Success after success led to US Gold, one of the biggest software houses of the time, buying the Ultimate brand. The US Gold/Ultimate releases were generally considered to be well below par compared to Ultimate's previously high standards. Bubbler and Martianoids, two of the titles in question, flopped badly and sales were poor. Ironically, today these two games command some of the highest prices for 8-bit games around. Funny old world, isn't it?

So, why do collectors hold Ultimate titles in such high esteem? Personally, we think it's a combination of several elements. The air of mystique that surrounded the company gave them a secretive yet cool vibe. Needless to say, their games were superbly presented, with large black box packaging, almost obscenely glossy instruction booklets that read like a small novella, and box art that was always appealing to the eye.

They also had (and still have) a fan base unlike any other company and today's collectors are still hunting their titles out. Almost without exception, every game released on any of the 8-bit formats Ultimate produced for, tends to pull in consistently higher prices than games from other software houses.

What they're worth



Of the two versions, the silver inlay release is more valued by collectors

The earlier releases, such as Pssst, Cookie and Jetpac, regularly fetch £3 to £5. Granted, not a wallet-bursting amount by any stretch of the imagination, as these titles are plentiful and generally easy to obtain. However, if they are the silver-inlay variations that were released earlier in conjunction with Sinclair, double that figure is possible. Tranz Am is another cheaply found title, except for the elusive Sinclair silver version, which is virtually unobtainable. Apparently, it does exist, but we've never seen a copy. If it is out there in the collecting world and it was auctioned on eBay, we think it's safe to say it would pull in a decent three-figure sum. It is one of the Holy Grails of Spectrum games collecting – if you don't count Ultimate's legendary non-release, Mire Mare. More on that later though.

Tranz Am is one of the only 10 Sinclair ROM releases. The complete set could cost you over £400!

During the early days, Sinclair eyed the popularity of consoles and toyed with the idea of releasing games on ROM cartridge format. These would slot straight into your Sinclair Interface II (or a similar third-party device, like the RAM Turbo interface) and the game would load in seconds – not even enough time to rub your eyes in disbelief! There were only ever 10 games released in this format, four of which were Ultimate games.

Pssst, Tranz Am, Cookie and Jet Pac all got an airing as ROM cartridges and the prices of these are rising all the time. They regularly appear on collectors' most-wanted lists and prices are high. Typically, you would expect to pay up to £50 for a cartridge in excellent condition, complete with instructions and the red rubber hood that protected the edge connector of the cartridge. The other ROM cartridge releases were a mishmash of Sinclair titles, ranging from Chess to a couple of Horace games. Nothing ground breaking admittedly, but they are still very desirable and can set you back an impressive £35 a throw.

These comparatively high prices aren't just restricted to the Spectrum community either. Commodore 64 owners who want to collect Ultimate releases are generally going to pay more for the privilege. Ultimate's C64 releases weren't rated as highly as their Spectrum counterparts and presumably sales weren't as high, making them harder to find and more expensive to buy. Imhotep, one of Ultimate's less well known games, can fetch up to £50 on a good day. Cosmic Battlezones, the BBC Model B compilation of Jet Pac, Lunar Jetman and Alien 8, can command a similar price. As Lunar Jetman was never released as a stand-alone title on the BBC Micro, buying Cosmic Battlezones was your only chance to get the game as an original.

This rare BBC Micro compilation is one of the most sought after Ultimate items

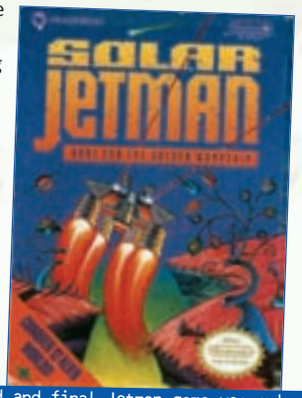
The C64 disk releases of Sabre Wulf and Underwurlde are also very hard to find due to them only being available as mail order upgrades to the existing tape versions. A leaflet was enclosed with the tape editions for a limited time, offering the upgrade for £4. These were the only two Ultimate games available in this format and the upgrade service was never applied to any other Commodore release. Expect to pay between £40 and £50 for a copy.

There are also many foreign re-releases of Ultimate games, but these don't seem to have captured the imagination of collectors as much as the UK releases. Most are easily tracked down, such as the Spanish Erbe releases. Some are even unopened. However, prices for these titles are a fraction of what the UK versions command.

There are, however, a few exclusions to this rule. Not commonly known about, and certainly incredibly hard to find, are the Japanese MSX ROM cartridge versions of Gunfright, Knight Lore, Nightshade and Alien 8 released by Dexter Soft. They come in video-sized cases and have completely original artwork. Splendid curios for the collection that will set you back approximately £50 a piece – if you can find them.

Spot the difference! The Japanese versions feature unique artwork, making

Although not strictly Ultimate, Solar Jetman on the NES must be added to the list of Ultimate collectables. Being one of Rare's more prominent releases, you can expect to pay around £5 for the cartridge only and £10 for a complete boxed version. On the other hand, the Spectrum version of Solar Jetman, appears to have disappeared off the face of the Earth. STORM, the software house responsible for converting it from the NES, must have had a partially finished product as Crash magazine gave it a two-page preview with several screenshots. Its current whereabouts are unknown.



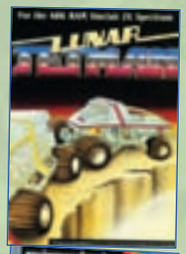
The third and final Jetman game was only available for the NES, although an unreleased C64 version has recently surfaced

The same cannot be said of the C64 version however. It was basically the same story of game made and game lost. That was until recently when Haydn Dalton, who handled the graphics, found the complete game and released it onto the Internet. What a nice chap. Apparently, there are also completed Atari ST and Amiga conversions of Solar Jetman in existence, but these have gone the same way as the Spectrum version. For the ultra completist, there was also an arcade coin-op version of Solar Jetman released in 1990. Find one of those and we'd be highly impressed!

As an aid to the wary Ultimate collector, we've listed every original UK release across all formats. This includes a guide price as to what you might potentially have to shell out for each game. Be warned, to get a complete set of Ultimate games is not going to be cheap. Dig deep people, it's worth it!

Spectrum

Alien 8	£8 - £12
Atic Atac	£3 - £5
Bubbler	£60 - £80
Cookie	£3 - £5
Cookie (Sinclair silver inlay)	£5 - £10
Cookie (ROM cartridge)	£35 - £50
Cyberun	£25 - £30
Gunfright	£10 - £15
Jetpac	£3 - £5
Jetpac (Sinclair silver inlay)	£5 - £10
Jetpac (ROM cartridge)	£35 - £50
Knight Lore	£8 - £12
Lunar Jetman	£3 - £5
Martianoids	£25 - £30
Nightshade	£10 - £15
Pentagram	£15 - £20
Pssst	£3 - £5
Pssst (Sinclair silver inlay)	£5 - £10
Pssst (ROM cartridge)	£35 - £50
Sabre Wulf	£8 - £12
Tranz Am	£3 - £5
Tranz Am (Sinclair silver inlay)	£100+
Tranz Am (ROM cartridge)	£35 - £50
The Collected Works	£30 - £40
The Collected Works (on +3 disk)	£50 - £60
Underwurlde	£8 - £12



Commodore 64

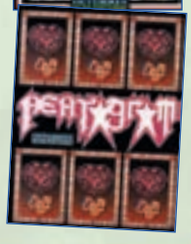
Blackwyche	£15 - £18
Dragonskulle	£15 - £18
Imhotep	£40 - £50
Entombed	£15 - £18
Nightshade	£25 - £30
Outlaws	£30 - £35
Sabre Wulf	£15 - £18
Sabre Wulf (disk)	£40 - £50
Staff of Karnath	£8 - £12
Underwurlde	£20 - £25
Underwurlde (disk)	£40 - £50

Amstrad CPC

Alien 8	£8 - £12
Bubbler	£35 - £50
Cyberun	£25 - £30
Gunfright	£15 - £20
Knight Lore	£8 - £12
Martianoids	£25 - £30
Nightshade	£15 - £20
Sabre Wulf	£15 - £20

MSX

Alien 8	£15 - £20
Bubbler	£40 - £50
Cyberun	£30 - £35
Gunfright	£15 - £20
Knight Lore	£15 - £20
Martianoids	£30 - £35
Nightshade	£20 - £25
Pentagram	£25 -£30



>Retro collecting stories

A post on the Retro Gamer message board (**www.livepublishing.co.uk**) asked readers to contribute any interesting stories concerning retro collecting. Here are a selection of the best...

Poster: PeeJay
Date: 23rd January 2004

I have one collecting story I remember fondly, at Wisbech car boot sale. Wandering around, I noticed a box with a rubber-keyed Spectrum sticking out of it. I had the other half with me at the time, who is driven nuts by my obsession, so I walked past and tried my hardest to ignore it.

However, half an hour later, when she'd had enough and wanted to go home, I told her I was popping off for five minutes and ran back to the box. It was still there, so I casually glanced through it (not appearing to look too interested) and asked him how much he wanted for the box. "A fiver?", was the reply. Detecting the presence of a mug on the stall, I decided to push my luck. Having a good look through, I noticed the power supply unit was missing. "Oh," I replied, "there's no power supply, so I can't even test if it works when I get it home – er, I'll tell you what, I'll take a gamble for a couple of quid."

Uneasily he said, "Three?" "Done!" I responded, thinking to myself he had been! Getting the box of goodies home revealed the following – one 48K Spectrum, complete with RF and tape leads (though no PSU), which fired up with no problems. One Currah Microspeech unit – no demo tape or instructions, but a quick check on the World of Spectrum Web site told me everything I needed to know to get it going. One RAM Turbo interface. One mono portable tape deck. One personal stereo (why?). Oh, and a good two or three dozen games, some boxed, some without, including Cookie.

Most of it has since been sold on eBay. I think the Spectrum brought about £20 and the Currah unit around a tenner. The games went for a song (although I still have Cookie), the personal stereo went in the bin, and the tape deck is gathering dust (I have a Spectrum +2 myself, so that is superfluous). I reckon I managed to snap up a bargain there! I'm hoping the same bloke clears his loft out at some point and finds a ZX80 gathering dust in the corner.

Poster: Frank Gasking
Date: 23rd January 2004

Boot fairs always seem to be the source of the best bargains. One boot fair I visited didn't really have anything at all, but just before leaving, I noticed a distinct brown case slightly covered by some books. Low and behold, underneath was an old-style C64 – no leads, no games, just the main unit. The guy saw me looking right away, and just said "You can have it for 50p". Expecting it not to work, I was shocked to find it in perfect working condition.

BBC Micro

Alien 8	£10 - £15
Atic Atac	£20 - £25
Cosmic Battlezones	£50 - £60
Jetpac	£10 - £15
Knightlore	£10 - £15
Nightshade	£20 - £25
Sabre Wulf	£15 - £20

Vic-20

Jetpac	£5 - £10

NES

Solar Jetman	£5 - £10

>Manic collector

If you're looking to build up a collection but the complete Ultimate catalogue seems a little too ambitious, why not concentrate on the Manic Miner and Jet Set Willy games instead? Like the Ultimate games, these ever-popular titles are very desirable and almost always command a higher price than your average retro game. At present, Manic Miner and the two Jet Set Willy games can be picked up reasonably cheaply on the more popular systems like the Spectrum, C64 and Amstrad.

On other formats though, it's a different story. Do you remember the Einstein? Did you know that both games were released for it? Bit of a shocker we know. Well if you want the originals expect to pay up to £25 a piece for them. Yes, we know, it hurts. Even systems like the Oric-1 and Sam Coupe were home to official versions of Manic Miner, and both had extra caverns to escape from, making them particularly collectable. And don't forget The Perils of Willy, the spin-off that only appeared on the Vic-20.

The really hard-to-find titles in the JSW family are the editors for the Spectrum. Limited availability, limited numbers sold and extremely hard to find. All the known editors are worth between £10 to £25. Softricks' release of its Mk2 editor is probably the most well known and the easiest to find.

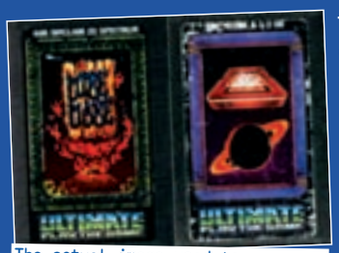
Here's a rundown of all the Manic Miner/Jet Set Willy releases, along with an up-to-date price guide:

Spectrum

Manic Miner (miner cover)	Bug Byte	£5 - £10
Manic Miner (alien hand cover)	Bug Byte	£3 - £5
Manic Miner	Software Projects	£2 - £4
Manic Miner	Mastertronic	£2
Jet Set Willy	Software Projects	£3 - £5
Jet Set Willy 2	Software Projects	£3 - £5
Jet Set Willy 2	Mastertronic	£2
Jet Set Willy Editor Mk1	Softricks	£20 - £25
Jet Set Willy Editor Mk2	Softricks	£10 - £15
Jet Set Editor	Paul Rhodes	£15 - £20
Jetset Willy Editor	Spectrum Electronics	£15 - £20
Jet Set Designer	P & M Software	£20 - £25

Commodore 64

The Mire Mare mystery



The actual image used to illustrate the auction. Fact or fiction? You decide

There are two words known to Ultimate collectors that conjure up the need for big dollops of nostalgia and a desperate glimpse into the unknown corners of an already mystical company. Please be upstanding for Mire Mare.

At the end of Underwurlde there were three different exits identifying three further games that Sabreman would star in. These were Knight Lore, Pentagram and Mire Mare. We waited and waited, scratching chins and sighing heavily hoping that Mire Mare would be released but it never was.

Apparently, during the US Gold takeover of Ultimate, US Gold wanted to use Ultimate's previous releases for a new budget label they were working on. They enquired about the progress of Mire Mare, as this was potentially going to be used as one of the budget titles. The story goes that the Stampers told the US Gold bosses that the game was nowhere near completion and took the remainder of the game with them.

It later emerges though, according to an interview with an old Ultimate employee, that Mire Mare does exist and had even been played by him. Suddenly, pulses start racing. Further evidence, albeit dubious, that Mire Mare may have been completed featured in an eBay auction in April 2003. A picture showing what looked to be a packaging sample for Mire Mare appeared amongst several other Ultimate boxes.

The seller couldn't be contacted and the auction was mysteriously ended with a couple of days to run. Had someone jumped in and made a tempting offer? Was the box genuine? Nobody really knows for sure. The auction was listed on April Fool's Day – was this an indication of intent or pure coincidence? Whatever the truth is, it all adds to the Ultimate mystique.

The only people who really know what's left of Mire Mare are the Stamper brothers themselves. You really cannot underestimate how almost all the Spectrum and Ultimate collecting community would love to know if Mire Mare really does exist. Even if it is buried deep in the Ultimate vaults, at least knowing it exists would satisfy the curiosity of almost 20 years of searching. Releasing it would be monumental. Please Tim and Chris put us out of our misery and let us know about Mire Mare!

Manic Miner	Software Projects	£2 - £4
Manic Miner	Mastertronic MAD	£2
Jet Set Willy	Software Projects	£2 - £4
Jet Set Willy 2	Software Projects	£3 - £5
Jet Set Willy 2	Mastertronic	£2

Amstrad CPC

Manic Miner	Amsoft / Software Projects	£7 - £10
Manic Miner	Software Projects	£2
Manic Miner	Mastertronic	£2
Jet Set Willy	Software Projects	£2
Jet Set Willy	Mastertronic	£2

MSX

Manic Miner	Software Projects	£2
Jet Set Willy	Software Projects	£2
Jet Set Willy (Bee-Card ROM)	Hudson Soft	£30 - £40
Jet Set Willy 2	Software Projects	£2

BBC Micro

Manic Miner	Software Projects	£3 - £5
Jet Set Willy	Software Projects / Tynesoft	£5 - £8
Jet Set Willy 2	Software Projects / Tynesoft	£7 - £10
Jet Set Willy 2 (disk)	Software Projects / Tynesoft	£10 - £15

Commodore C16/Plus 4

Manic Miner	Software Projects	£3 - £5
Jet Set Willy	Software Projects	£3 - £5
Jet Set Willy 2	Software Projects	£7 - £10

Atari XE/XL

Jet Set Willy	Software Projects / Tynesoft	£7 - £10
Jet Set Willy (disk)	Software Projects / Tynesoft	£10 - £12

Einstein

Manic Miner	Software Projects	£25 - £30
Jet Set Willy	Software Projects	£25 - £30

Dragon 32

Manic Miner	Software Projects	£5 - £7
Jet Set Willy	Software Projects	£5 - £7

Commodore Amiga

Manic Miner	Software Projects	£7 - £10
Jet Set Willy	Software Projects	£7 - £10

Vic-20

The Perils Of Willy	Software Projects	£5 - £8

Oric-1

But my most memorable collecting moment was a few years ago. I walked past one particularly big box, and I noticed a black C16 cassette deck at the top. I went to walk past (as I thought it was C16 stuff and didn't really collect that stuff at the time), but something made me go and check it out. To my surprise, there was a ton of C64 games underneath. While looking through to see what they were, and noticing that the box said "£5 LOT", the guy behind the stall said "You can have the lot for £3, just to get rid of it". In shock, I handed over £3 feeling slightly guilty (Well, OK, not really). But as I paid and continued searching, the big shock came. I uncovered one of my most wanted and one of the rarest C64 games, The Great Giana Sisters! That just topped the lot and made it one of the best bargains I've ever found.

Other moments include buying a Megadrive and 14 boxed games for £10, A Vic-20 for £1.50 and a complete C64 setup (1541 disk drive, MPS printer, monitor and games) for £12. The list goes on, and hopefully it will continue!

Poster: Andy H
Date: 23rd January 2004

Before people realised eBay existed (or maybe it was before it existed – I can't remember), I used to get dragged along to car boot sales by the wife. The only way she could get me there without complaining was by saying "Maybe they'll have some old computers there for you to look at."

I did pick up some bargains, such as a Spectrum +2 and a massive box of tapes for £5, an early UK version of the Vic-20 with box and packaging, some rubber-keyed Spectrums and a magnitude of games for them all. As Peejay found, the mugs – I mean sellers – at the time did not see the value in these old computers when Amigas and PCs were the norm, so you could pick most things up for a fiver or less. With modern eBay I find it rarer to see anything decent at car boots these days. But thank God for eBay. I would not have been able to get hold of original copies of my old 8-bit favourites otherwise.

These days, my wife sneaks off to the boot sales by herself in case I do come home with more "vintage junk", as she now refers to it.

Poster: Shaun Bebbington
Date: 23rd January 2004

I don't really see myself as a collector as such. However, I purchased a Commodore SX-64 for £265 as its serial number on the back said ooooooo1, and was dated. I checked it out, and it appears that this was indeed number 1 off the production line. I also have number oooo893, which was made one month later.

Poster: ColiCub
Date: 23rd January 2004

Hmmmm. For me it's not so much car boot sales but more like the Cash Converters and Cash Generators in Edinburgh I run to. I got a nice condition, boxed Japanese Zoom on the Mega Drive for £1.49 a few weeks ago, and a mint SNES Castlevania IV (still with the game in its little cellophane bag) for £3.99. And my SNES, all leads, two working pads, two unboxed games, for just £9. Nice!

>Computer magazine collector

Magazines were as much part of the gaming history of the 80s as the games and machines themselves. Whilst many people are happy just to collect software and hardware, there are many others who are just as enthusiastic about the magazines of the time. In fact, magazines are not only a valuable reference material for collectors to trace old games but are also becoming a valuable commodity in there own right. Don't fill those bin-liners just yet!

Although there were various magazines to choose from for each computer system, one publisher in particular is valued higher than the others. Newsfield Publications, the people behind Crash, Zzap 64 and Amtix, caught the imagination of computer owners more than most. Even today, there are Web sites devoted to the magazines of Newsfield and prices are on the up.

Crash commands some extraordinary prices for its first issue. If you had to go out and buy a nice minty-fresh copy, either from a collector or through an auction site, you would be doing very well to get change from £75. Most other issues of Crash would bring in a reasonable £3 to £5 each depending on the condition. Be careful though, as many issues featured competitions and promotions, and that often involved taking a pair of scissors to the magazine. So, if you're buying a stack of magazines supposedly in mint condition – check inside and see if they are as complete as they should be.

Although most of the 98 issues of Crash are all worth about the same, issue 19 is one that frequently draws more attention and wrenches a few more quid out of buyers than the norm. This was the issue with the infamous Sinclair User parody, Unclear User. Sinclair User took umbrage to this take off and requested it be withdrawn immediately. Most of the issues were recalled, the offending pages removed and then released again with a sticker on the front cover apologising for the missing pages. However, subscriber issues were sent with the pages left intact making these magazines a lot more collectable than the standard issue 19. A complete issue is worth around £10.

Zzap 64 and Amtix, for the Commodore 64 and Amstrad CPC respectively, are also collectable but don't quite command the same high prices as Crash. Most issues of these go for around £2 to £3 each, although the first issues of each are worth around £5 to £10. The rare issue zero of Amtix can go for up to £10.

There are several other magazines that are worthy of note, not least Sinclair User and Your Sinclair, as these were Crash's main competitors and all three seemed to have a slightly different type of reader. Both are collectable and can be picked up at very reasonable prices.

Multi-format magazines were plentiful during the 80s and none more so than Computer and Video Games. C&VG, which is still around today, was the world's first games magazine, and issue 1 (dated November 1981) is a rarity that doesn't show up too often. Expect to pay around £40 to £50 for a nice clean copy. Early issues leading up to the start of 1984 can also fetch around £10 a piece.

There are many other magazines that deserve mention, such as Big K, Your Spectrum, Amstrad Action, Computer Gamer, Atari User and Dragon User. These can still be picked up for a relatively small amount, although as a resource and a window back to the golden age of computing, they are priceless. Maybe a good investment for the future? Who knows...

These first issues are the ones to look out for -

The top 10 collectables

With so many games released over various formats, there's undoubtedly going to be a few super-rare titles to locate. Even then you've got the task of prising it away with a big wedge of cash. None, as of yet, can compare to the Neo Geo AES version of Metal Slug, which would set you back a cool £1,000 for a pristine copy, but they would certainly cost you more than a bag of Beefy Monster Munch. Here's a rundown of 10 games that would put a severe dent in your wallet should you wish to own them. These are all known to exist – albeit in some cases, just a handful of copies. With Ultimate being one of the most collectable software houses, it comes as no surprise to see several of their games mentioned. So, in no particular order...

1. Rocky (Gremlin - Spectrum)

A boxing game with the slightest hint of a connection to a famous series of films. It had to be withdrawn because of this similarity, but was later renamed Rocco and re-released. Rocky is worth around £30. Rocco is worth around 30 pence.

2. Football Manager (Addictive - Oric-1)

Everyone knows this classic from Kevin Toms as it appeared on just about every home system. The Oric-1 version, however, is extremely rare, with literally a handful of the originals known to exist. It was released and found to be bug ridden, making it impossible to play. It was immediately withdrawn from sale but a few copies escaped into the wilderness. Expect a copy to cost you the price of a small chateau in Burgundy.

3. Bubbler (Ultimate - Spectrum, Amstrad and MSX)

An average game at best. It didn't sell particularly well and so there's not many of them out there in the collecting world. All versions are rare and tend to sell for around £50 minimum, ranging up to £80 in the case of the Spectrum.

4. Cubicolor (Rob Fulop - Atari 2600)

A rarity if there ever was one. Only 50 copies of this sliding puzzle game were ever produced, with each cartridge being individually numbered by the author. Rob Fulop originally designed the game for Imagic but it was rejected, so he released it himself. This is thought to be one of the rarest games ever to be produced for the 2600. Value? You could be talking in the range of £200 to £400. Man, that's going to make your eyes sting!

5. The Great Giana Sisters (Rainbow Arts - Commodore 64)

A Super Mario Bros clone that landed the makers in hot water. Nintendo were threatening to flex their corporate muscles due to the similarity between the two games and it was withdrawn very quickly. There are limited numbers of Giana Sisters in circulation and they usually pull in about £30 a time. It was also rumoured that a few Spectrum copies got out into the public domain but these were almost certainly pre-production copies as it had been reviewed in a couple of magazines.

6. Anything commercially released for the ZX80

Not terribly specific we grant you but you try and find an original ZX80 title. In fact, many ZX80 only titles were released in such low numbers, you'll do well to get anyone to part with them in the first place. Potential outlay for a ZX80 title could be anywhere between £10 and £50. Definitely collectable and certainly something worth hanging on to.

7. Ultimate: The Collected Works (Ultimate - Spectrum)

Whether it's the tape or +3 disk version of Ultimate's 11-game compilation, it's always guaranteed to draw the buyers in. The tape version, complete with Tim Stamper's map of Ultimatum, hint sheet and instructions, usually sells for around £30. The disk version pulls in about double that amount.

8. Cosmic Battlezones (Ultimate - BBC)

For the Ultimate enthusiast, this BBC compilation always proves to be one of the hardest to find and can even challenge Bubbler on the pricing scale. A pristine copy of this could raise an impressive £60, slightly less if worn or missing instructions.

9. Jet Set Willy (Hudson Soft - MSX)

You read correctly. Not Software Projects, but Hudson Soft. This is a Japanese release for the MSX in its Bee-Card format – basically a credit-card sized ROM similar to those used on early Sega Master Systems. With Jet Set Willy still having a major following, this rare version can regularly haul in £40. Hard to find but with some lovely original artwork on the card itself.

10. Any Spectrum ROM cartridge

With just 10 different titles released for this underrated medium, the prices of cartridges are always high and there's always fierce competition to get them. Most cartridges will sell for around £30 to £50, although the four Ultimate releases, if complete and unblemished, could raise a fair few pounds more.

Poster: cronosoft.co.uk
Date: 25th January 2004

I found a MB Vectrex at a local car boot last year. It was 11.30am, and apparently it had been out on the stall all morning with no takers.
It came with eight boxed games, all with inlays.
"How much do you want for your Vectrex?", I asked.
"The what?" he replied.
"That games thing there."
"Is a fiver okay?"
I didn't have the heart to beat him down on the price.

Poster: StuOvine
Date: 26th January 2004

I started out just collecting the 'few' gems that I remember from my C64 days. I found that car boot sales were littered with plenty of goodies – and all being sold for really low prices. The last game I bought from a car boot was Midwinter for the Amiga – for a modest 10p.

Unfortunately, over the past year or so, there has been a large decline in retro games at car boot sales. I blame eBay totally. I mean, who wants to stand in a muddy field when you can do it all online?

Poster: alexhighnumber
Date: 26th January 2004

On Sunday I was driving up to the front of a Carpet Warehouse shop and was just pulling into a space when my 'retro sense' started tingling and my eyes were drawn to a nearby skip. My eyesight isn't great as I refuse to wear glasses but I could feel it was a NES.

Over to the skip and sure enough it was a NES, with one pad, power supply, aerial cable and a Zapper gun, all loose in a bag. So I went home with that and a rug! At least it shows there's still this kind of find to be had!

EDIT: Should just mention I got the rug from the shop – I'm not that bad!

Poster: chaoticjelly
Date: 29th January 2004

I've had a lot of good finds but this was probably the best. I was at a field car boot early one Sunday morning, as per usual, and after looking around, I approached a car that had just pulled up, one of those latecomers. It was a guy and his two kids. I noticed the kids taking some bundles of Megadrive/Mega-CD games out of a box, taped together with masking tape.

Prices on the bundles were £2 each. I quickly grabbed the bundles and checked out the games. "Are the games £2 each?", I asked. I was told by one of the kids it was £2 a bundle! One of the games was the Hideo Kojima Mega-CD masterpiece Snatcher. I couldn't believe my luck. When inspecting the games after the buy, most of the Mega-CD games were scratched to hell, but, I couldn't believe it, Snatcher had its manual, and was in near mint condition!

8-bit hardware

OK, you've got a wedge of cash burning a hole in your pocket and you're looking to buy back the beloved computer that accompanied you on your so-called misspent youth. If you've looked in the usual places, such as eBay and car boots, you'll probably find a large variation between the prices you might pay.

Here is a price guide, which is by no means definitive, although it will give you an indication of the sort of figure you should expect to pay for your long lost 8-bit system. The guide prices are for a bog-standard, second-hand machine without any packaging or add-ons. Obviously, a classic computer or console complete with its original packaging is going to bump the price up substantially, as is a machine described as new or mint-in-box. RG*

Acorn

Acorn Atom	£50
Acorn Electron	£30
BBC Model B	£35

Amstrad

Amstrad CPC 464	£20
Amstrad CPC 464 Plus	£25
Amstrad CPC 664	£35
Amstrad CPC 6128	£25
Amstrad CPC 6128 Plus	£30
Amstrad GX4000	£25

Atari

Atari 130 XE	£25
Atari VCS 2600 (Wooden)	£40
Atari VCS 2600	£25
Atari VCS 7800	£25
Atari 400	£35
Atari 800 XL/XE	£40

Commodore

Commodore Vic-20	£20
Commodore 64	£30
Commodore 64c	£20
Commodore 128	£40
Commodore 16	£30
Commodore Plus/4	£30

Dragon

Dragon 32	£35
Dragon 64	£60

MSX

MSX I/II/II+	£30 - £50

Oric

Oric-1	£50
Oric Atmos	£40

Sinclair

Sinclair ZX80	£125
Sinclair ZX81	£40
ZX Spectrum 16K	£35
ZX Spectrum 48K	£30
ZX Spectrum+	£30
ZX Spectrum 128K	£50
ZX Spectrum +2	£25
ZX Spectrum +2a	£35
ZX Spectrum +3	£40
Sinclair QL	£40

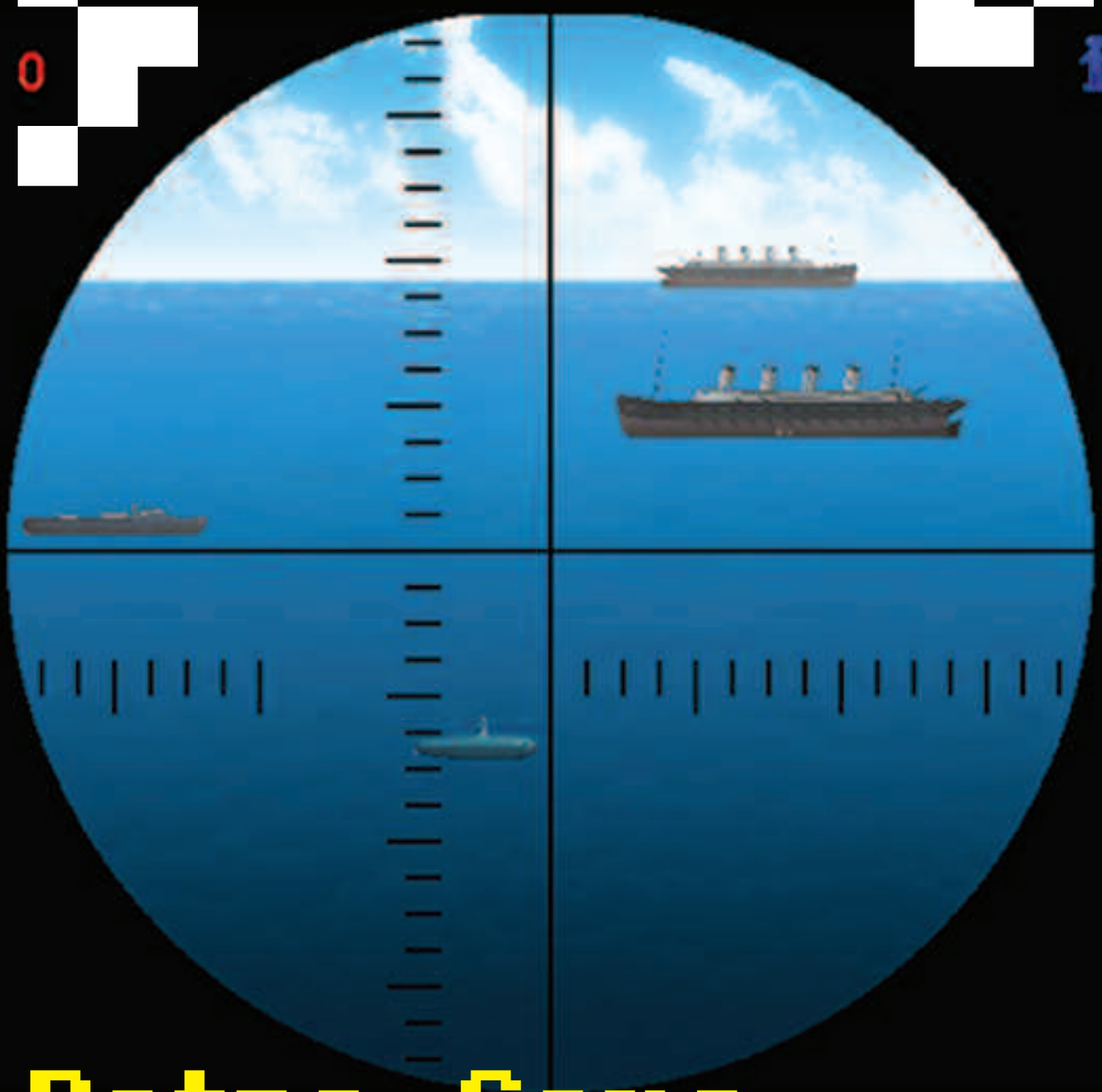
Miscellaneous computers

Mattel Aquarius	£40
Texas Instruments TI99/4A	£30
Tandy TRS80	£35
Jupiter Ace	£150
CGL Sord M5	£125
Sam Coupe	£80

Miscellaneous consoles

NES	£20
Sega Master System	£20
CBS Colecovision	£50
Mattel Intellivision	£30
MB Vectrex	£100
Philips Videopac G7000	£20

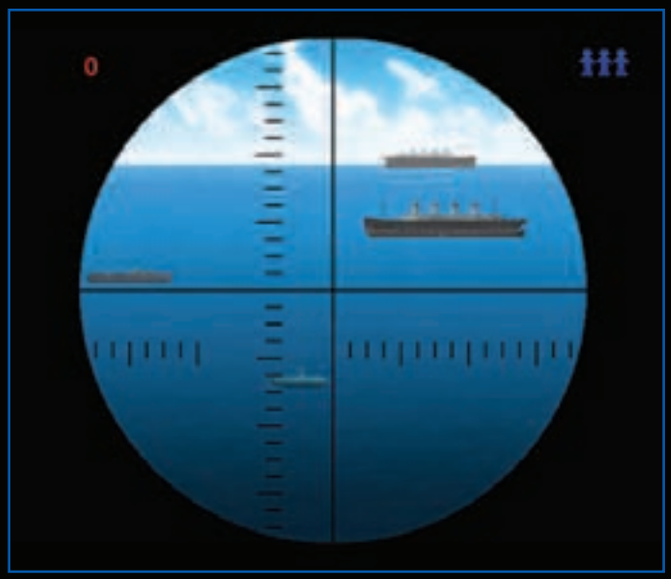
eMag



Retro Game Creator

Ever dreamt about developing your own games, but don't know where to start? If that's you, wake up and feast your bleary eyes on our beginner's guide to game creation! **Jason Darby** uses Multimedia Fusion to create a 2D shooter in a series of easy steps

Welcome to this guide on how to create your own games using Clickteam's Multimedia Fusion (MMF) program. We are going to make a game called Sub-Attack (aka U-Fight), in which you are the captain of a submarine trying to disrupt the shipping lanes of the enemy. Using your periscope and torpedos, you must defeat the computer-controlled ships and defend your submarine against torpedo attacks. Here is a screenshot of the game in action.



What do I need?

Besides this guide, everything you need is on the Retro Gamer coverdisc, under the Retro Game Creator tab. You will find a 30-day demo of MMF 1.5, plus demos of other Clickteam products. There's also a Sub-Attack archive containing the following files and folders:

Subattack.lib	A MMF library file
Subattack.exe	A playable version of the completed game
Application1.cca	The game's CCA file, which you can open in MMF and see the structure of the code
\Music	The music used in Sub-Attack.
\Sounds	The sounds used in Sub-Attack

To play Sub-Attack, unzip the contents of this archive to your desktop and run Subattack.exe. Press any key to start the game, then use the left and right cursor keys to move the periscope. When you have an enemy ship in your sights, hit the space bar to fire a torpedo. The following guide will show you how to quickly and easily create this game from scratch.

Before we start, it should be pointed out that this guide is aimed at beginners. However, we recommended that before you start, you read "Click – A Beginner's Guide", as this will give you introductory information on the basics of using MMF. This PDF document is located on the Retro Gamer coverdisc.

What is MMF?

MMF is a flexible and powerful authoring tool that allows you to achieve impressive results with no programming skills or prior knowledge. Simply start by creating a frame containing the graphics you want, then drag them into place. Finally, set their behaviours in the intuitive, grid-style Event Editor and you are on your way to creating a great game! But this fast and effective approach does not sacrifice flexibility and power. The objects, known as extensions, allow you create even the most complex and fully functional software.
Besides games, you can also use MMF to create screensavers, presentations and applications.

The MMF demo

The 30-day demo version of MMF 1.5 provided on the coverdisc allows you to save your files in the native .cca format (you cannot create executables or screensaver files). You can import .cca files that you have saved in the demo version into the full version. This article can also be used if you are using the full version of MMF 1.5 (although it's recommended that you download the latest upgrade to MMF 1.5 before continuing).

What is a library?

To speed up development of complex programs, you can create a library of common graphics and objects. MMF comes with many graphics, buttons and backgrounds, and they are organised into groups within a library. We are going to be using a library for our Sub-Attack game (Subattack.lib), which contains all of the graphics and objects that we will use in the creation of our game. This will make constructing the game quicker and easier, and means you don't have to spend time drawing all of the graphics.

First steps

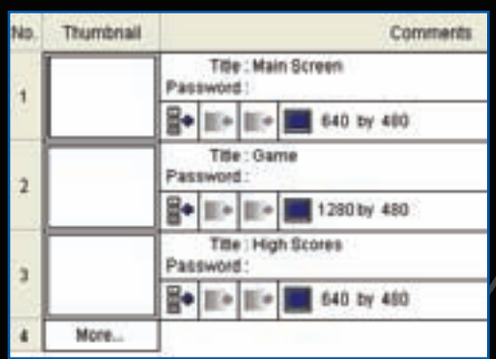
First, we need to open our library of objects to be able to build our game. Go to File/ Open and change the File of Type to Library files. Locate the Subattack.lib file (it will be in the folder you extracted the contents of Subattack.zip to) and double- click on it. At this stage, you may have two library windows next to each other. If so, close the Multimedia Fusion Library window as it's not required for this game. The library should appear as displayed here.

As previously mentioned, the library contains all the building blocks we need to put our game together. But in order to get the game working, you will need to place these items on the playfield (the area of the game that will be displayed) and enter the specific coding. The game is split into three distinct parts:

Menu screen	Which has a title screen and music
Game screen	Where the actual game is played
Scores screen	Where all scores are shown and new high scores are entered

This information is very important because we will need to create a frame to represent each game screen (so the whole game will have three frames). Select File/ New, then choose Application and click OK. This will load up a brand new MMF application with one frame. Next, click on the number 2 and a dialog box will appear. Now select Frame to add a second frame. You will need to do this again to add the third and final frame.

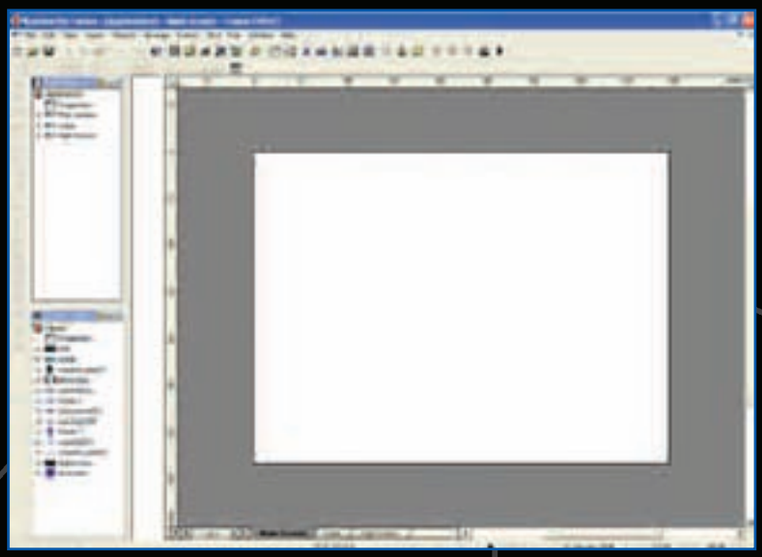
Our game resolution will be 640x480, so we don't need to change that for frames one and three. The game screen will need to be longer so that we can scroll from side to side. Accordingly, we need to amend the size of frame two to 1,280x480. Finally, rename the untitled frames and they should now look like the screen to the right.



To enter the frame and view the playfield (where will we put our graphics and objects), click on the number 1. The playfield is the blank, white area on the right-hand side of the screen. You can now drag and drop items from the library into the playfield. So, let's start creating our game.

I need space!

So far, everything is looking good. The only problem is that you're running MMF at an 800x600 screen resolution and you don't seem to have much room for each of the windows (if you're running it at a higher resolution, then there is nothing to worry about). MMF is very flexible and many of the screens/windows and toolbars can be moved around. The first thing you can do to create some room is drag the library window to under the application window. To do this, click on its menu bar and hold down your left mouse button. You will now be able to drag this window to anywhere within MMF, but for now, drag it so that it's on top of the application window. Let go of the left mouse button to complete the move. It should now look something like the picture below.



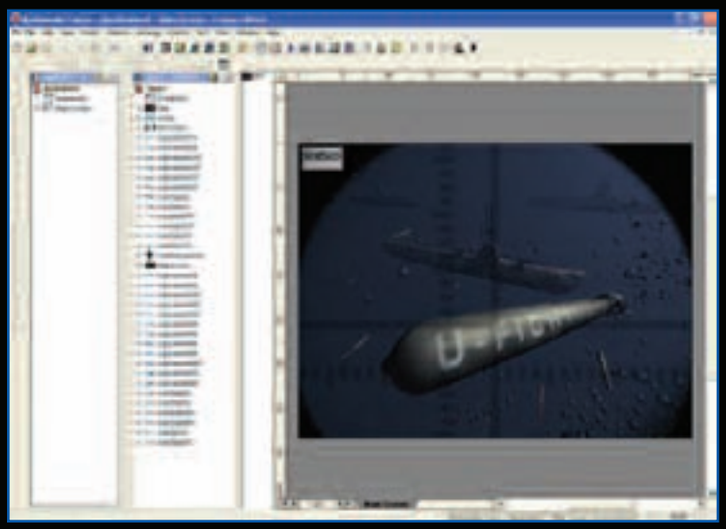
You can also resize the application and library windows. Move your cursor to the edge of one of these windows and a double arrow cursor will appear. Hold down the left mouse button and drag in the direction you want to increase or decrease the window size.

The main screen

The main screen is generally used as a loading or introductory screen, which presents a graphic of the game and gives the player a chance to get ready to play. Our main screen is already completed – it is called 'title' and is in the library. Drag it from the library to the playfield. You may need to adjust the screen's position on the playfield so the white areas of the playfield are covered. To do this, use the cursor keys to move it a few pixels at a time. Your screen should now look similar to the image below.

Now that we have our main menu graphic on screen, we will need to do some coding. There are a two things we want our main menu to do – play some music and start the game when the user presses a key or the left mouse button. To do these things we need to use the Event Editor. Click on the Event Editor button and the screen that appears will be split into Conditions, Events and Actions.

Conditions are tests within your game that trigger actions. All actions depend upon MMF detecting a condition and then executing the actions associated with it. Collisions, movement, and visibility are



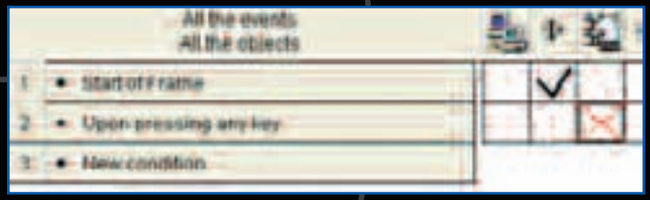
all examples of conditions.

Events are the foundation of your MMF game. Each event consists of one or more condition, action, and sometimes function that you define in the Event Editor. Each event waits for a specific condition to occur in your game and then executes the associated action(s).

Actions are responses to conditions in your game. Once a particular condition is detected, the action(s) associated with it take place. Examples of actions include destroying an active object, jumping to the next frame, and increasing the score object.

Click on the New Condition line and a condition dialog box will appear. We simply want to play some music when the game starts. To do this, double-click or right-click on the Storyboard Controls icon (it's marked with a chess board and knight picture), then select Start of Frame. You will now have the words 'Start of Frame' where 'New Condition' once was. This means that at the start of the frame, something will happen. We now need to specify what that will be, so move your cursor over to the Speaker icon. Right-click on the box to bring up a list of actions. Select Play and Loop Music – this will keep playing the music the number of times you specify. Browse to the audio file called Seascape.mid in the Music folder. The Expression Editor will then appear, asking how many times the music should play before the it stops. Enter the number '5'. This means that the music will play five times before it stops.

Click on the Run Application button to see what the game currently looks like. You should have a 640x480 window, showing a nice menu screen, and music should start playing. Not bad for five minutes work! As we have all three frames already in place (though only frame one has anything on it), we can now set the menu screen to react to both a keyboard and mouse action, and then jump to frame two. To do this, click on New Condition and select The Mouse Pointer and Keyboard/ The Keyboard/ Upon Pressing Any Key. Now that we've set up our condition, we need to set an action that will happen when a key is depressed.



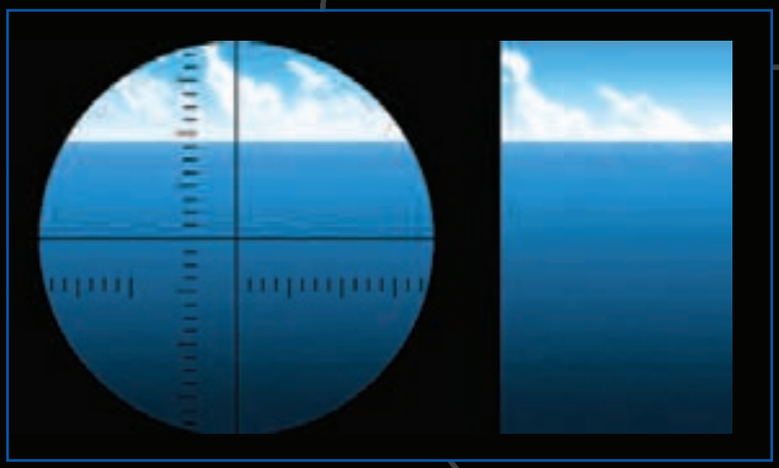
Again, move over to the Actions until you are under the Storyboard Controls option (shown as a red X on the graphic above). Right-click and select Next Frame. So now, when the player presses any key on the keyboard, they will move to frame two. We need to repeat this process so that same action occurs when the player clicks the left mouse button. To do this, click on New Condition, and then select The Mouse Pointer and Keyboard/ The Mouse /User Clicks and select the left mouse button. You can now copy the action from the key condition to the

mouse action (you can do this by simply dragging and dropping it). Now, the same thing will happen at the main menu if the player presses the mouse or the keyboard.

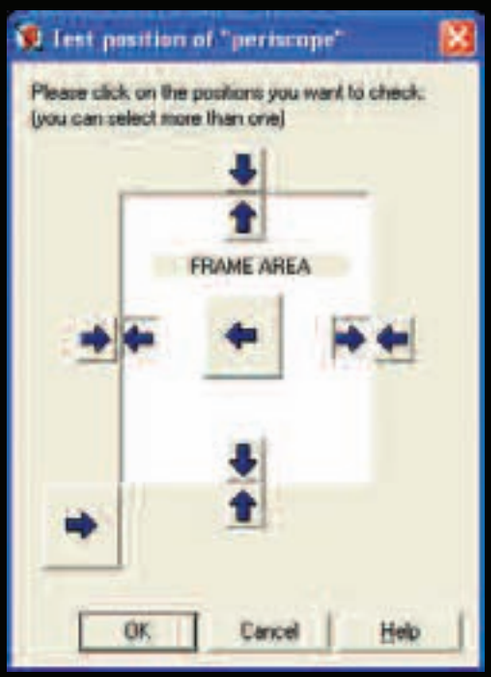
You can test the game again by pressing the Run Application button. If it doesn't work correctly, check your coding and then retest it.

Game screen

Now that the main menu screen is in place, we can begin to create the game proper. Click on the Storyboard Editor to display all three frames. Select frame two and drag the items onto the playfield so it resembles the graphic below.



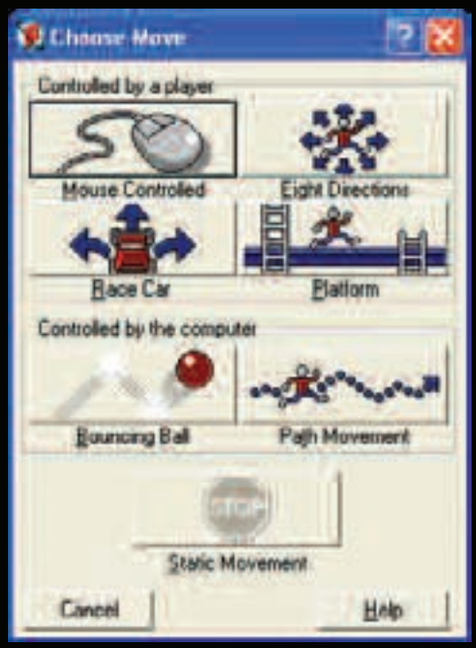
If you run this frame, nothing happens, which isn't very exciting is it? So, let's make the screen move to the left and right. Click on the Event Editor icon and you will see that there is no programming currently listed. This is because the previous code we wrote was for frame one only. Click on New Condition, then double-click on the Periscope icon in the New Condition dialog box. Finally, select Position/ Test position of Periscope.



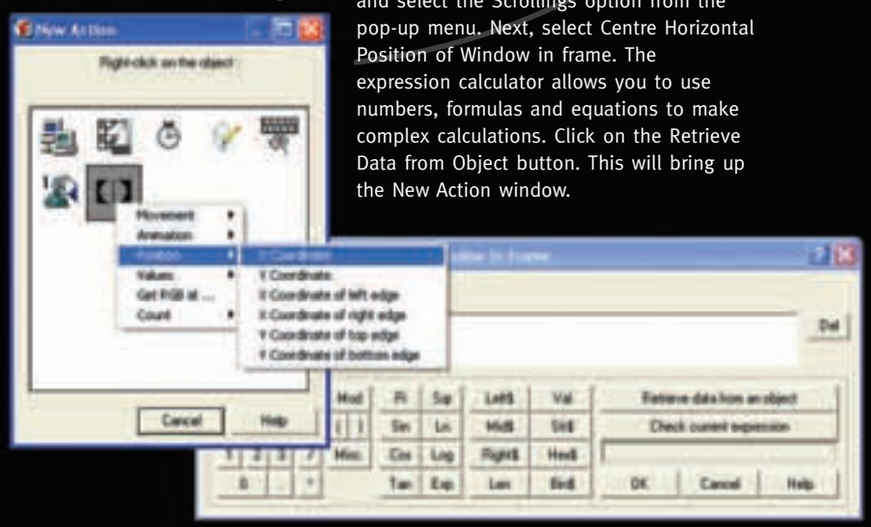
Ensure you select the two arrows pointing outwards of the frame. This means it will check for when the periscope touches the left and right sides of the frame and stop it from moving. Now that we have specified the edges of our playing field, we must tell it to stop. So, to the right of the condition ("Leaves the play area on the left or right"), right-click under the periscope and select Movement/ Stop.

At the moment, though, the periscope does not move, so next we have to specify a movement type to it. There are a number of different movement types available in MMF, and these are categorised under two distinct areas: controlled by a player and controlled by the computer. For the periscope, the easiest type of movement to use to is Eight Directions (even thought we will only use two – left and right).

Click on Eight Directions to bring up the Movement Setup dialog box. Click on the Direction tab and select the left and right arrows. Now, if the left or right cursor keys are pressed, a movement in that direction will be initiated. Once this is done, click on the Initial Direction tab. This controls movement in a certain direction at the start of a movement path. We don't want it to move until the player presses a cursor key, so ensure all directions are unselected (you can do this by clicking on each or clicking on the blank circle button on the right to clear them all). Click OK to close the dialog box and complete the movement configuration. If you now run the frame, you will be able to move the periscope left and right.

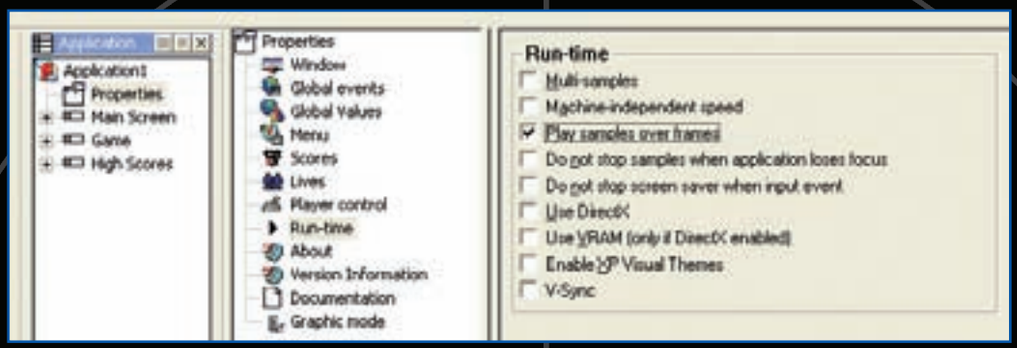


But wait – it also moves off the screen! We want the periscope to stay static while the sea moves. To do this, we must go to the Event Editor and add a new condition. Double-click on New Condition and select Special (the icon that looks like two networked computers). This will bring up a menu bar. Select Always/ Never, Always. This will set the condition to Always, meaning that this event will always run. Now, move to the right of the condition and stop under the Storyboard Controls icon (on the same line as the Always condition). Right-click and select the Scrollings option from the pop-up menu. Next, select Centre Horizontal Position of Window in frame. The expression calculator allows you to use numbers, formulas and equations to make complex calculations. Click on the Retrieve Data from Object button. This will bring up the New Action window.



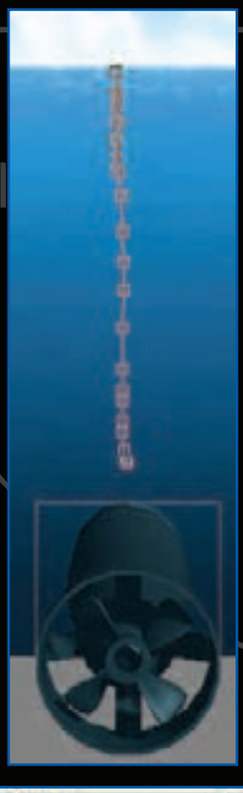
Double-click on the Periscope icon and select Position/ X Coordinate. This will then enter the text 'X(periscope)' into the expression calculator. Click OK to complete the event. You will now find that when you run the frame, you can move the periscope correctly to the left and right.

If you run the application and click on the main menu screen to go to the game, you will notice that the music continues to play. We wish to turn it off, as we only want to play during the first frame. Click on the Properties icon under the Application Name, then click on Run-time and ensure Play Samples over Frames is unchecked. This should now solve



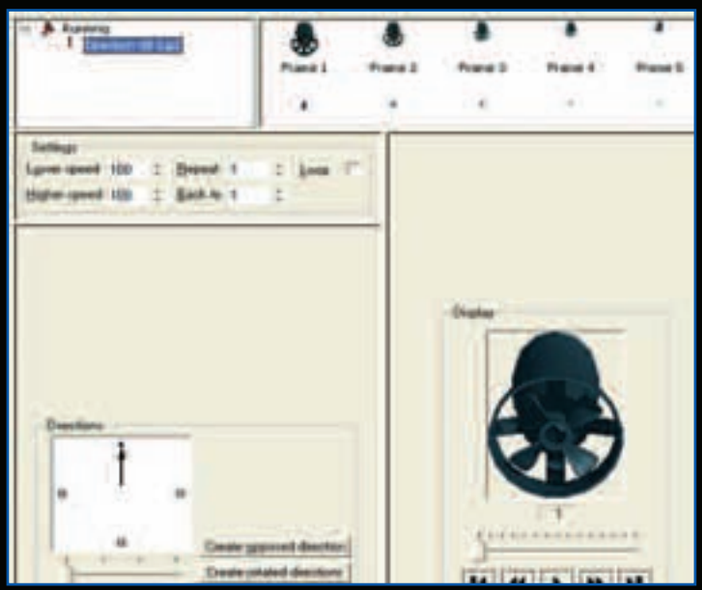
the issue of the sound being played over a number of frames. Re-run the application to test.

Firing the Torpedo

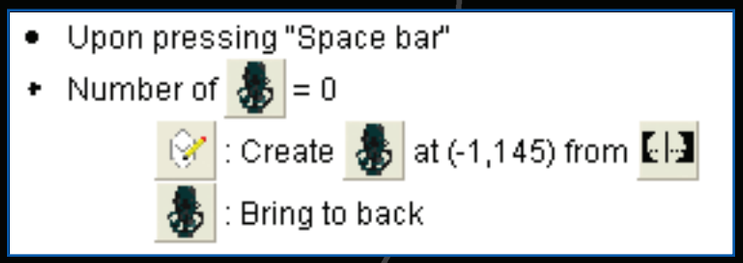


Drag the 'Torpedo_Player' object from the library onto the playfield (to the right of the periscope). Right-click, choose Properties and select New Movement/ Path Movement. You will need to place path points on the screen. To create the movement path, you can use either New Line or Tape Mouse. For placing each item, it's a lot easier to use New Line. Select New Line and then click on an area above the torpedo and begin to create your path. It should look similar to the picture on the left.

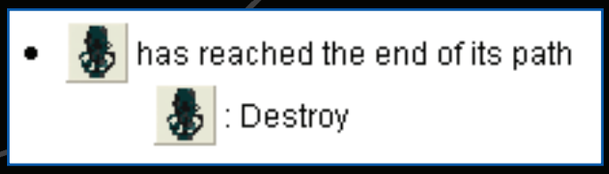
If you wish to slow any part of the movement down (the torpedo should slow down as it moves further into the distance), you can click on one of the points (the squares) and reduce the speed by dragging the slider to the left or typing in a lower number. The lower the number, the slower the speed will be. Once you have completed the movement, click OK and run the frame. You will notice a slight problem – the torpedo fires but then disappears too quickly before it gets to the top of the screen. This is an issue of animation speed – the torpedo is currently going through its animation sequence too quickly. To amend the animation, double-click on the torpedo to bring up the Animation Editor. Under Settings, you will see that there is a lower and higher speed. This is the speed at which the animation will play, and currently it's set at 100. Reduce both the higher and lower speed to 20. You can test to see the difference by clicking on the Play button beneath the display. Once you are satisfied with the speed, close the Animation Editor and select to save the changes. Remember, if you make a really big mistake, you can always delete the torpedo and start again.



You should now be getting used to adding code to the Event Editor, so from now on, we will just display the code and explain what it does. The code below fires a torpedo from the centre of the screen, providing there are no torpedoes already on the screen (so you can only fire one torpedo at a time). Remember, if you get stuck, you can always view the completed version of the game and check the Event Editor code to compare it with what you are doing.

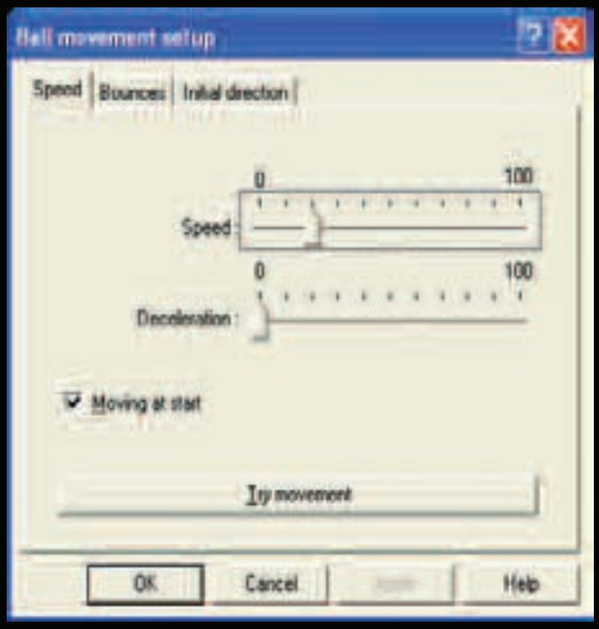


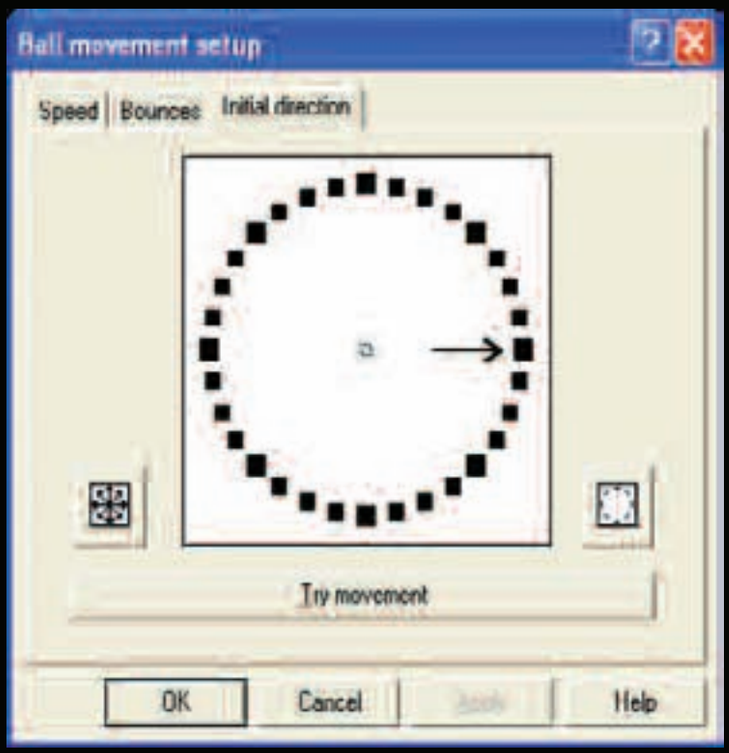
When the torpedo gets to the end of its movement path (when it reaches the horizon), we want it to be destroyed otherwise you will end up with lots of torpedoes sat on the horizon, which obviously wouldn't look very good! Enter the code, then run the frame and test it by firing torpedos. Everything should work as expected.



Ships ahoy!

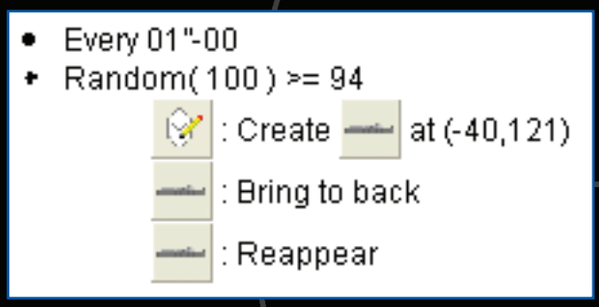
A game without a target wouldn't be very interesting now would it? So, let's place some enemy ships onto the playfield. Each ship needs to have a movement set for it. For this, we are going to use Ball Movement. This might seem a little strange, but we can use the principal of this movement to help us create moving ships (also, it's a computer-controlled movement, so the computer can



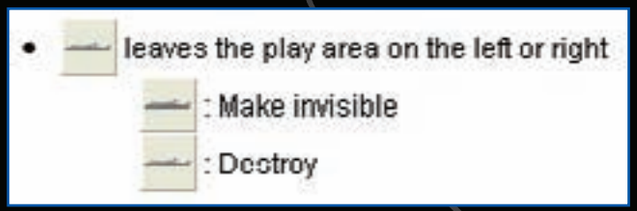


actually move all the ships for us). Right-click on one of the ships, then select Properties/ New Movement/ Bouncing Ball.
Adjust the speed to suit the ship type and to make hitting the ships easier/harder. For this ship, we have changed the speed to 20. The direction the ship will travel in can be configured under the Initial Direction tab, depending which way the ship is pointing. Now, if you run the program, you will see the ships scroll across the seascape.

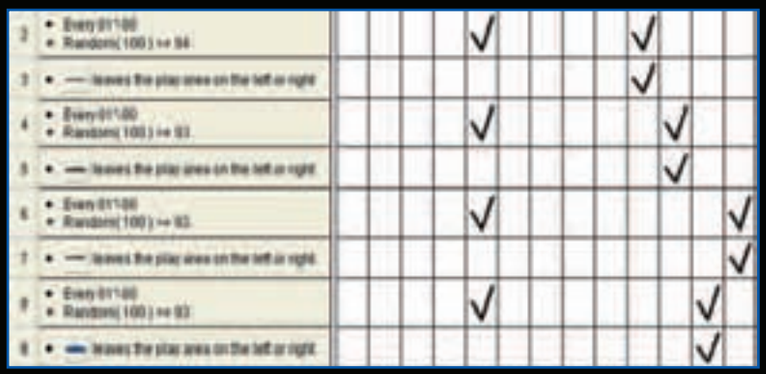
To keep the game interesting, we need to make ships appear at random intervals. Every second, we perform a check on a random number between 0-99 (0 is counted as the first). If the result of that random number is equal to or above 94, it will create a new ship at a specified location (it will keep the movement routines you have already specified). So, by reducing or increasing the random number, you can make more or less ships appear (the lower the number, the more chance that the condition will be true and a new ship will appear).



To ensure the game doesn't grind to a halt with too many graphics on screen, once a ship has left the playfield, we destroy it (as a new one is going to be created anyway). We make it invisible first to ensure that you don't see it run the animation of the ship being destroyed.



Once you have done this for all the ships, you should have something that looks similar to the graphic below.



Scoring and lives

Before we go any further, we need to place a score counter on the screen. Normally, you would do this by going to Insert/ Insert an Object. However, to make things easier, the counter object is already created within the library. Drag the Score1 object to the left-hand side of the frame window (on the black area of the periscope).

We also need to show how many lives the player has. Drag the Player1 object onto the playfield (to the right of the periscope view). Once both the score counter and the lives are on the playfield you should see something similar to the graphic below.

Great shot!

At the moment, when we launch torpedoes, they go straight through the ships, preventing us from sinking an enemy vessel. In Sub-Attack, when a torpedo hits a ship, it destroys the torpedo and the enemy ship, adds points to your score and plays an explosion sound. The score received depends on the ship that is hit (the faster ships will be more difficult to hit). You need to add some code to ensure that all this happen in the appropriate manner for each ship. Once done, when you run the frame, you should be able to destroy the ships, hear an explosion sound and earn some points.

Abandon ship!

The final piece of code we will create for this frame will make the enemy ships attack us. By using the random creation code that we used for the appearance of the ships, we can do something similar for the enemy torpedoes.

- Every 01"-00
- Random(100) >= 60
- Pick one of
- X position of >= 320
- X position of <= 960
  - : Create at (0,2) from
  - : Bring to back

Once it's reached the end of its path (us), the torpedo will be destroyed, an explosion sound will play and the player will lose one life.

- Only one action when event loops
- has reached the end of its path
  - : Destroy
  - : Subtract 1 from Number of Lives
  - : Play sample EXPLODE2

If our lives counter reaches zero (it starts on three by default), then it will jump to the next frame, which is the score board.

- Number of lives of = 0
  - : Next frame

If we are lucky enough to hit an enemy torpedo with one of our own, both will be destroyed, an explosion sound will play, and we'll get some lovely points!

- Collision between and
  - : Destroy
  - : Destroy
  - : Add 1500 to Score
  - : Play sample boom1

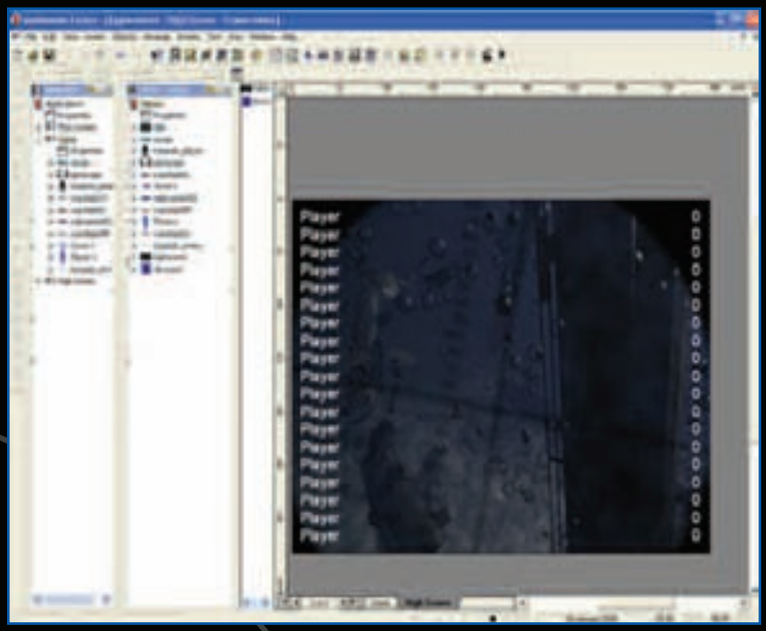
If, when running the game, you find that ships are overlapping the periscope, you will need to change which layer the periscope appears on. Right-click on the periscope and click View/ To Front. You will then need to do the same for both the score and the lives counter, as they will be at the very front, followed by the periscope, the ships and finally, at the back, the sea.

So, we have finished building our game and only have the scores screen left to work on. Click on the Storyboard Editor and select frame three.

Score screen

We are now on frame three. Drag the high scores background and the object called 'high-scores' onto the playfield. The latter is a high-score table that comes with MMF.

All we need to do now is add a piece of music to the scoreboard frame



(it makes it a little more fun) and put the scores on the board! (Note, you can easily set up predetermined scores on the board so the player has something to beat).

The last bit of code you need to create is for the start of the frame. It should ask for the player's name, then play a looped music file. If the player then presses a key, the game will start again!

- Start of Frame
- has a hiscore
  - : Ask name
- Upon pressing any key
  - : Restart the application
- Start of Frame
  - : Play sample Drunken Sailor 5 times

More features

That's it – you've completed your first game! The guide may finish here, but that doesn't mean your game has to. Why not add some of your own features? You could add more ships, planes or weather effects, create different kinds of levels, or increase the game's difficulty. So go on, float away on your imagination and create a really explosive game!

eMag

Emulation Nation

You're no doubt familiar with the emulators available for your PC and Mac, but did you know you can also emulate classic machines on the latest consoles? **Martyn Carroll** looks at these cross-platform emulators and talks to one of the authors involved in the growing 'homebrew' scene

Consoles were originally designed for the sole purpose of playing games, yet the latest machines are sold as multimedia devices, complete with CD audio playback, DVD movie playback and online capabilities. But it doesn't end there. A console is, basically, a box containing one or more processor and several custom graphics chips, so it can be hacked just like any computer. A small group of resourceful programmers have been doing just that, and their efforts are already paying off.

By design, a console should only run games written specifically for it, but homebrew emulators allow you to play games designed to run on other platforms. This immediately opens up access to 1,000s of classic games. Yes, you can do the same on a PC or Mac, but game emulation on a console is often more authentic because you can output through a TV rather than a monitor, and control games using a joypad instead of a keyboard.

Over the next few pages, I'll look at the best emulators available for the Dreamcast, PlayStation 2, Xbox, GameBoy Advance and Gamepark 32. Many of the emulators mentioned can be downloaded from www.consolevision.com, although where possible, you'll find them on the Retro Gamer coverdisc.

Dreamcast

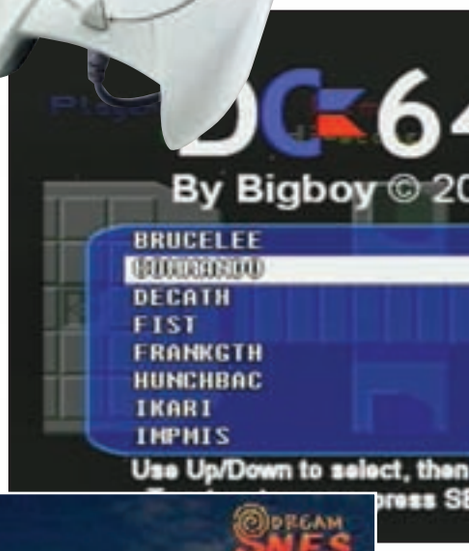
Sega's console may have failed commercially but a vibrant homebrew scene exists for the machine. Emulators, in particular, are very popular, and you can run a whole range of classic computers and consoles. Best of all, no modchip is required, so anyone can download an emulator and run it in a standard, off-the-shelf Dreamcast. Some of the emulators must be burnt to disc in special ways, but generally it's easy and hassle-free.

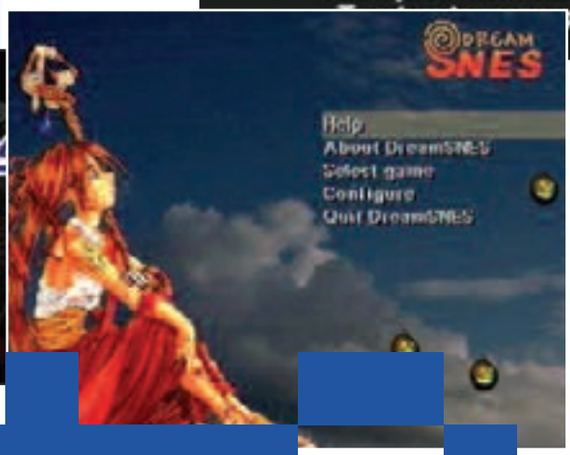
You'd perhaps expect to see a decent Megadrive emulator, especially as Sega themselves have released Sega Smash Pack – a commercial collection of Megadrive games running under emulation – on the Dreamcast. DEGenrator is the closest thing to a working emulator, although the authors themselves have branded the latest release as unstable. More successful is DreamSNES, a Super Nintendo emulator based on the popular SNES9x emulator for the PC. Sound and speed are not 100% faithful, but it's certainly close, and a huge library of games is currently playable. Up to four controllers can be used, and additional support is included for the Dreamcast keyboard, mouse and even lightgun. The VMU is supported too, so you can easily save your progress as you play through games.

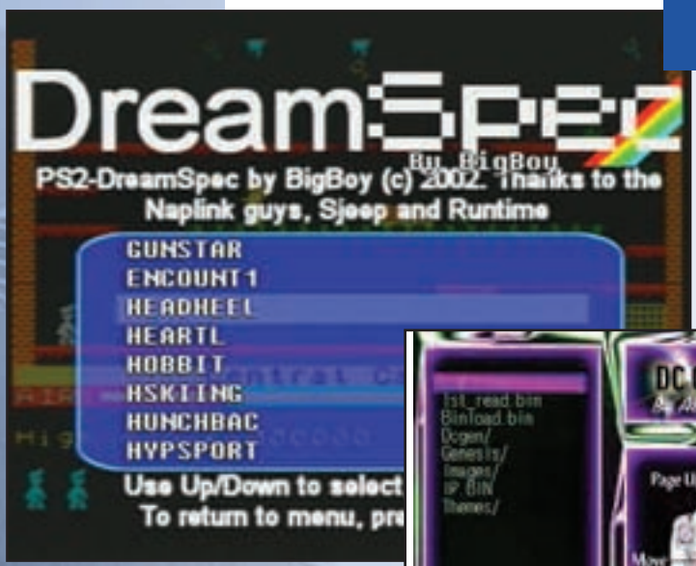
Stepping back in time from the SNES, NesterDC is an excellent NES emulator for the Dreamcast. It shares many similarities with DreamSNES, in that speed and sound are *almost* perfect, and many games are 100% playable. Game states can be saved to the VMU, and you can even enter GameGenie cheat codes if any games are too tough! Several other NES emulators are available for the Dreamcast, but none are as advanced as NesterDC.

Other console emulators include: SMS Plus DC, a Sega Master System and Game Gear emulator; DCgnuboy, a GameBoy Classic and GameBoy Color emulator; [D]Colem, a ColecoVision emulator; and DCStella, an Atari 2600 emulator. All are at varying stages of development, so don't expect high compatibility rates. There are also a couple of MAME (Multiple Arcade Machine Emulator) ports but both are barely out of beta and haven't been updated for a couple of years. Much better are the Single Game Arcade Emulators – standalone emulators that run specific arcade games. Past releases have included 1943, Bubble Bobble, Wonderboy and Street Fighter II.

Several computer platforms can also be emulated on the Dreamcast, including the MSX (DreamMSX) and Apple II/II+ (Apple II Soul Captor). More popular are the Commodore 64 (DC64) and Spectrum (DreamSpec) emulators, and both are by the same author. DC64 is blighted by a number of nasty bugs, and as the project is officially dead, you'll have to live with them. DreamSpec is much more stable, and comes bundled with 187 pre-loaded Spectrum games, so you can simply burn the disc image provided and be ready to play. Keyboard support is included, so you can play any Spectrum game on the Dreamcast providing it's saved as a snapshot, and it's possible to save game states to the VMU. The only thing lacking is Spectrum 128K support. It's in there, but there's presently no way to load 128K games! Shame. A dedicated Spectrum 128K emulator is currently in development for the Dreamcast, and in the long run it may render DreamSpec obsolete.







Scummy software

If you're a fan of point and click adventure games, you'll no doubt be familiar with LucasArts' SCUMM (Script Creation Utility for Maniac Mansion) system. In addition to Maniac Mansion, SCUMM has been used to create many games, including Day of the Tenticle, Sam & Max Hit the Road, Full Throttle and the Monkey Island games. ScummVM is an open source virtual machine that runs many SCUMM games, and even some non-SCUMM adventures like Simon the Sorcerer 1 & 2, Beneath A Steel Sky and, with the latest release, Broken Sword 1 & 2.

ScummVM has been ported to many different platforms, including the Dreamcast. Unlike lots of Dreamcast ports, this is no token effort that's rarely updated. Every time the source code is updated, new Dreamcast builds are made available for download. This means that the list of compatible games is growing with each update. For further details, including information on how to run ScummVM, visit **www.scummvm.org**.

PlayStation 2

The PlayStation 2 is currently the world's best-selling console, so it's somewhat surprising that only a small number of developers have targeted this huge user-base. Those who *have* dirtied their hands under the hood of Sony's machine have produced some stunning results.

Unlike the Dreamcast, the PS2 must be fitted with a modchip in order to boot the emulators. After all, homebrew software is not licensed by Sony and the code is unsigned. It is possible to load unsigned code by removing the front of the PS2 and prodding the disc tray with a sharp object, but it's not recommended as you'll probably blow up the machine and get electrocuted to boot. Homebrew software then provides at least one legitimate reason for fitting a mode chip, because it isn't illegal to use and distribute unsigned software as long as it's written using free development tools.

Both DreamSpec and DC64 have been ported to the PS2 by the original author. DreamSpec PS2 is virtually identical to the Dreamcast version, and likewise comes bundled with over 180 Spectrum games. DC64 PS2, on the other hand, is much more stable than the original, and plays many games at full speed with full sound. The emulator does not include support for disks (.d64 files), keyboard support is yet to be implemented (no text adventures then), and you cannot save game states to the PS2 memory card. Furthermore, neither of the emulators autoscan directories for ROM files so you need to manually create a text file containing the name of every game on the disc.

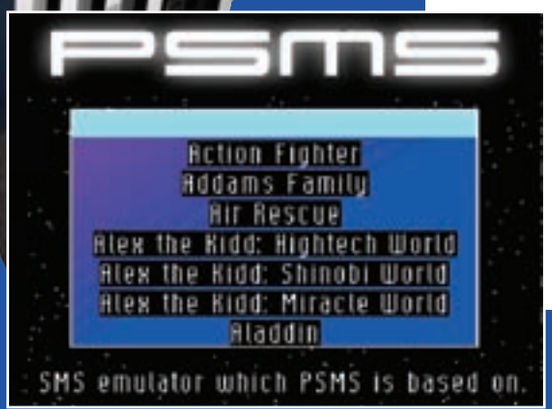
BeebEm PS2 is a port of David Gilbert's popular BBC Micro emulator, and it improves upon DreamSpec PS2 and DC64 PS2 by including both keyboard and memory card support. In addition, it's an excellent Model B 32K emulator with faithful 48Khz mono audio output. Not only does it run at full speed, but it can run up to five times faster than the original if required! Sadly, it does not autoscan discs so you need to index the games in an XML file. If you're not familiar with XML formatting, the BeebEm PS2 home page (**www.jboom.com/beebem_ps2**) features a handy XML tool that will generate the file for you.

One emulator which does autoscan discs is PGEN. To use this superb Sega Megadrive emulator, you simply throw the emulator files and game ROMs onto a disc and you're away. You can even fill a CD with just ROMs and then insert it once the emulator has loaded. Not only is it easy to use and set up, but PGEN offers next to perfect speed (with stereo sound) and a very high compatibility rate. Game states can be saved to either the memory card or RAM (for fast access), and multitap support allows for four-player games. Best of all, development of PGEN is ongoing, and updated versions come bundled with new features. The latest version, for example, adds support for Sony's new PS2 hard drive, so you can quickly load ROMs without the need for a CD. At this rate, it probably won't be long before PGEN includes support for Mega-CD and 32x games.

Another emulator which is regularly updated is SNES-Station. The Super Nintendo emulator is a port of the excellent SNES9x, although the PS2 version features its fair share of changes. Like PGEN, it offers high-speed emulation and sound, plus game state saving, multitap support and an auto ROM scanning function. It doesn't support Sony's hard drive yet, but that is planned in a future release.

Nintendo fans should also seek out ImbNES. This NES emulator runs on both the PlayStation 1 & 2, and offers full speed, full sound and support for many mappers. Setting up the emulator can be slightly tricky, as you must use the provided Rombank program to compile all your ROMs into a single file. Overall though, ImbNES is a great little emulator. The same can be said about PSMS, a Sega Master System and Game Gear emulator written by the same author as PGEN. While it is not as advanced as PGEN, it still deserves special mention as it was the first emulator to run on a PS2 without requiring the Linux kit.

There are a small number of other emulators available for the PS2, but they cannot be burnt to a CD. Instead, you need to upload them from your PC to your PS2 using the Naplink software and a special USB to USB lead. These include a Colecovision emulator, an Atari 5200 emulator, and perhaps most interesting of all, a version of MAME, the arcade emulator. This MAME point is very basic, being little more than a technical demo. It runs some of the older arcade games, but it's just too buggy and fiddly to recommend. Development has ceased too, so the only hope is that someone claims the code and builds on it.



SMS emulator which PSMS is based on.

Xbox

If you're looking to run MAME on a console then you need a modified Xbox. MAME-X was the first publicly released emulator for the Xbox, and it was immediately a case of can open, worms everywhere. Microsoft issued a cease and desist notice because the MAME-X binaries were built using a hacked version of the Xbox SDK (Software Development Kit). It is illegal to distribute programs written using this hacked software, and Microsoft forced **www.mame.net** to remove the offending binaries. The source code itself is not inherently illegal, and can now be downloaded from **www.mame-x.com**. It's then up to you to compile the code. If that's within your capabilities, you'll find an excellent emulator that supports over 90% of the complete MAME romset.

Due to the legal issues involved, we're unable to include Xbox-based emulators on the coverdisc, but we suspect a quick search of the Web will return positive results. There are in fact more emulators for the Xbox than any other console, and the list is growing weekly. This is down to the fact that the Xbox is relatively easy to develop for, especially for experienced Win32 programmers. After all, the machine utilises the Windows 2000 Kernel and is driven by DirectX.

Highly recommended is MAMEoS, a new alternative to MAME-X that is updated much more regularly. This means the compatibility list is continually growing, although like MAME-X, it struggles with any RAM hungry 2D games. For these types of game you're better using Kawa-X, as it can run many of the games MAME can't handle via the use of virtual memory.

As with the Dreamcast and PlayStation 2, you can run NES, SNES, Master System, Megadrive, Spectrum and Commodore 64 games, but the Xbox is also home to several unique emulation projects. UAE-X emulates the Amiga 500 and Amiga 1200 – a first for any console. Better still, it does this easily at full speed. WinSTonX is an excellent Atari ST emulator, and it too runs a huge number of games without dropping a frame. XboyAdvance, a GBA emulator, does suffer from a little slow down but it's hardly noticeable in many games.

Not only is the UAE-X emulator outputting through an Amiga 1081 monitor, but the Xbox gamepad port has been replaced with an Amiga joystick connector!

GameBoy Advance

Many would be surprised to learn that Nintendo's classy handheld is home to several emulators. After all, the device reads from manufactured cartridges, so how could you possibly upload unsigned code? The answer lies in readily available flash memory cards, shaped in the style of standard GBA cartridges. Once connected to a PC using a Flash Linker device, programs such as emulators can be uploaded to the card. Then it's simply a case of popping the card in a GBA and you're up and running.

The emulators available for the GBA are quite varied, although it's no surprise to see a trio of NES emulators, especially as many commercial GBA games are little more than updates of classic NES titles. The best of the bunch is without doubt PocketNES. It runs NES games at full speed (up to twice the speed if required) and emulates all sound channels. It also supports the GBA link cable, so you can either send PocketNES to another GBA or indulge in a little multiplayer action.

From the same author as PocketNES comes PCEAdvance, a PC-Engine/TurboGrafx-16 emulator. Many games do not yet run at full speed, and the ones that do often suffer from flickering visuals, but this is a highly ambitious project improving rapidly with each new release. And like PocketNES, it is possible to play multiplayer games by linking up to four GBAs. Somewhat more successful is DrSMS, a faithful Sega Master System and Game Gear emulator. This project is still in the early stages of development, but it runs many games without a hitch or graphical glitch. The same can be said for PocketSMS, though sadly, it hasn't been updated for over two years.

Finally, 8-bit enthusiasts shouldn't miss FooN, a Spectrum emulator which claims to be 'proudly un-advancing the GameBoy Advance'! The emulator supports literally thousands of Spectrum games, although only snapshots in the .z80 format are currently supported. This means you may need to use a PC-based Spectrum emulator to save out snapshots of certain games. FooN cleverly maps the Kempston joystick to the GBA d-pad, so the vast majority of arcade-style games can be played with ease. Development of FooN has since stopped, so if you're looking for a more up-to-date alternative, try the promising ZXAdvance.

GameCube

In a successful bid to stop the piracy of commercial games, the GameCube uses a proprietary 3in disc format. This has posed a problem for homebrew developers too – only recently have they discovered a way around it. By exploiting a vulnerability in an online game (Phantasy Star Online), resourceful scene members have been able to upload and boot unsigned code. However, the expected flood of homebrew software hasn't arrived – yet.

What we do have to date is GCChip, a simple Chip-8 interpreter. The Chip-8 was a virtual machine created in the 1970s, capable of running basic versions of classic arcade games like Space Invaders and Pong. GCChip comes with 26 such games built-in, making it easy to set-up and run. Also available is GBQ, a GameBoy Classic emulator. At present, the emulator is completely unoptimised and has no sound support.

It should be remembered that Nintendo's GameBoy Player allows you to play GameBoy games on your GameCube. So in a roundabout fashion, you can use any of the GBA emulators on the GameCube.

Gamepark 32

If you haven't heard of the GP32 then don't worry – it's not officially available outside its Korean home. There is, however, a growing UK community of GP32 fans who've invested in imported versions, and the word is spreading through good old grassroots word-of-mouth. In a nutshell, it's a handheld console – slightly bigger than the original GameBoy Advance – with a nice big clear screen, 8Mb of RAM and a chunky 133Mhz processor. Where it differs from other handhelds is in its storage. Rather than cartridges, the GP32 uses Smart Media Cards – the sort you'd use in a digital camera – meaning you can have up to 128Mb of rewritable memory. This has led to a thriving homebrew scene, with an emphasis on emulating the great and good gaming formats of the past. One SMC can store dozens of emulators, and hundreds of old games, so it's not hard to see why it's the retro gamer's console of choice.

The Holy Grail of GP32 emulation is a full-speed SNES emulator with sound. A handheld SNES? Pure heaven. It's not quite there yet, but OpenSnes9x is tantalisingly close. It plays SNES ROMs that are less than 4Mb in size (ie most of them) and although sound is patchy and more complex games run slowly, you can alter the clockspeed of the GP32 to speed things up to playable levels. Definitely a must have. More stable than the SNES emulator is GenEmu, a Megadrive emulator that works with around 70% of ROMs. Sound continues to be the stumbling block, but most games still run smoothly. Overclocked versions tax your console, but offer much faster results.

Probably one of the sturdiest emulators for the GP32, the cutely named Little John plays almost all Nintendo Entertainment System titles at perfect speed, with crisp sound. Just as with the NES, the Master System is well within the processing power of the GP32, so games run fast and smooth. SMS32 has few compatibility problems, though control mapping is sometimes a problem. It also plays Game Gear ROMs, and can stretch the image to fill the larger GP32 screen, so you get a super-sized game!

Emulating a console is one thing, but emulating a home computer is a tad more complex, and that's why CaSTaway requires a little more work to enjoy. As well as the emulator, you need to download the .tos operating system (not as hard as it sounds) and assign game files to a virtual floppy drive once in the emulator. It's a small amount of hassle, but well worth it. Compatibility is far from high (though it gets better with every release), but the games that do work are near perfect. You can even select a virtual keyboard or mouse for control.

For such a simple machine, the ZX Spectrum has always had troublesome compatibility issues when it comes to emulation. The same is true on the GP32, although GPSpeccy is about as stable as they come. Sound is a problem (and never the Speccy's strong point) while the reliance on keyboard input can make some games a slog to play. If you're looking to emulate the Commodore 64 then don't miss GP32. With a virtual keyboard for text input, user definable button configuration, high compatibility and small file sizes, there's no reason not to fill up a megabyte of your SMC with a ton of classic C64 games.

The rather obscure PC Engine console offered a range of arcade conversions and Japanese curios, and GPEngine plays almost all of them with no problems, and is a must for fans of the lesser known titles. The MSX series of consoles from the early 80s never really made a splash outside Asia, but there are some fun - if basic - games to be had thanks to the fMSX32 emulator. More recent fare can be enjoyed with fGB32, which emulates the GameBoy and GameBoy Color with some success. There are even emulators for the Dragon 32, NeoGeo and Wonderswan machines, so head to **www.gp32x.com** and fill your boots.

The Big Interview

BigBoy is the man behind the DreamSpec and DC64 emulators, and has experience of developing homebrew software for both the Dreamcast and PlayStation 2

RG: What is the appeal of writing emulators for consoles?
BigBoy: The biggest bonus for me is the correct screen refresh. This sounds complicated for anyone who doesn't know about computers, but it's fairly simple. On a Spectrum, for example, the screen is refreshed 50 times per second. On a PC the screen refresh changes a lot. The normal rate is around 70 frames per second but can go as high as 160. This can cause the screen display to stutter as the unnecessary frames are dropped. Consoles have no such problem as they run at the same refresh rate as the emulated machine, 50Hz for PAL and 60Hz for NTSC, so everything looks *just right*.

The other great benefit is that you can output through a huge TV! On a PC, you need to install special software and split the display – it's horrible. I'd imagine only a few folks ever try, and that's probably to watch Divx movies on a big screen. I doubt anyone does it with emulators.

RG: What is actually involved in writing an emulator?
BigBoy: It's really not that hard – for a Spectrum anyway. Emulating some other machines can be more complicated. The Amiga for example is a very, very hard machine to emulate. However, the basis remains the same. First you need to get the CPU emulated. This is a simple but long-winded job as each and every CPU instruction has to be emulated. Once the CPU emulation is up and running, you can start on the hardware itself. The Spectrum is one of the simplest machines to emulate because the hardware itself is so simple. The screen display resides at a fixed point in memory, and all you need to do is draw it after a certain amount of time has passed. Next we need to emulate the keyboard. Again, the Spectrum keyboard is very easy, as each key toggles on and off a bit of memory. The key presses can then be mapped to the controller. Once you have the keyboard emulated you'll have a basic emulator! The last thing to do is add a simple front-end for game selection and you're done.

RG: Isn't it easier to just port an emulator?
BigBoy: Many coders decide porting is for them, the advantages being that the code is tried and tested, and that will save you weeks tracking down peculiar bugs in your own code. The hard part is getting it to compile on your new platform. This is usually down to compiler variances, as certain libraries may not be available. If you're lucky, the program will compile easily and all you need to do is configure the emulated output to appear on a TV screen instead of a PC monitor.

RG: You've written emulators for both the Dreamcast and PS2. How do the consoles compare?
BigBoy: The Dreamcast is a nice machine and it's possible to boot home-made discs without a mod chip, meaning that everyone can burn and play. I must say I prefer the PS2. The biggest problem with the Dreamcast isn't the clock speed – 200Mhz is fairly fast – but the CPU cache. The CPU cache allows the processor to hold things it may need later in very fast memory. The Dreamcast cache is terrible while the PS2 one is amazing, running up to five times quicker! Screen access is also a pain on the Dreamcast. To get the best out of it you need to use various techie tricks like StoreQueues and 16-bit screens. This complicates things a lot. But on the PS2 I can use 256 colour screens easily, making the whole process quick and painless.

RG: How helpful are members of the PS2 homebrew scene?
BigBoy: The scene is fairly small now but it's growing quickly. Everyone involved is very friendly and helpful. Sjeep (the author of PSMS) has donated his sound library and it's allowed all of us to have sound support from day one. Runtime, who ported the BeebEm emulator to the PS2, is also making progress in other areas. Keyboards and memory cards are now becoming accessible, enabling users to save games just like real PS2 games. The development websites are also very friendly and their message boards are a fountain of information.

RG: Tell us about your PS2Frame program.
BigBoy: When I started doing homebrew PS2 stuff I found it hard to get up and running. So PS2Frame is designed to help out. It basically provides the programmer with a 256 colour screen, joystick input and sound support, all ready to go. All it needs is a simple 'hook' to process the emulator and then it will do all the grunt work for you. In effect, it's a basic 256 colour machine with joystick and sound support, so you could use it to write simple games as well.

RG: What would you like to see emulated to the PS2 next?
BigBoy: I'd love to see an N64 emulator, and it's certainly possible. Some of the earlier games like Super Mario 64 should run OK, later ones would struggle with the CPU load. The N64 ran at 90Mhz, about one third the clock speed of the PS2, so roughly speaking, that equates to just three PS2 instructions for each N64 instruction. Possible, but very hard.

A fully working version of MAME would also be fantastic. I have several JAMMA boards and I'd love to play arcade games at home on a big TV screen! My most wanted would be an Amiga emulator. That would be sweet.

RG: Finally, the Top 100 Retro Games feature in issue one has caused quite a bit of controversy. What are your favourite games?
BigBoy: There are so many! On the Spectrum, Manic Miner has to be up there, but so does Chuckie Egg, 3D Death Chase, Sabre Wulf, Jet Pac... the list goes on and on... you get the idea.

1984

advertising gallery

For your viewing pleasure, another collection of quality advertisements from old computer magazines. By 1984, the popularity of games was certainly growing, with colourful adverts for the latest arcade software taking precedence over adverts for boring, beige hardware. Here are some of our favourites from this classic year.

METAGALACTIC LLAMAS BATTLE AT THE EDGE OF TIME
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Packed into 20 mind-zapping zones and accompanied by incredible sonics.
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HOVER BOVVER
A totally original arcade game for C64 featuring outstanding graphics and a sound track created by a professional Piano Wizard. Gordon Bennet has borrowed his neighbour's Ait-Mo lawnmower. Mow your way through as many of the 16 lawns as you can before the pursuing neighbour retrieves his mower. Set your dog onto the neighbour to help you out of tight spots and don't annoy the gardener. Try not to plough through the neat flower beds or overheat your mower!
£7.50
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ABDUCTOR
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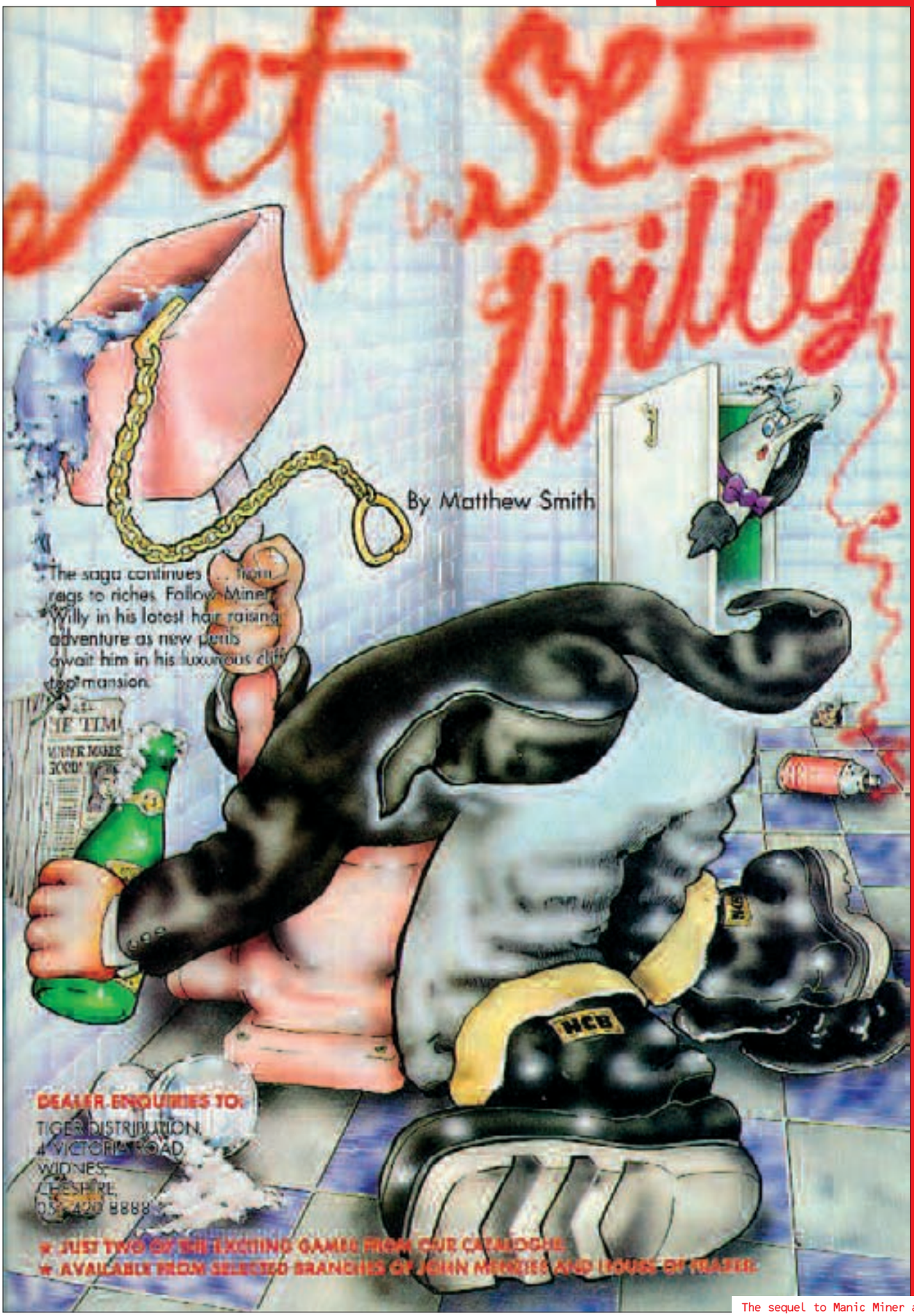
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Dungeon Master &amp - Chaos strikes back for Commodore Amiga. Chaos boxed, Dungeon Master is just the disc on its own. £20. Picture available.
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COMMODORE WANTED

Final three issues of Commodore Format magazine. Will pay £5 per issue.
lee.theasby@ntl world.com

Commodore Plus4 computer in fully working order. Preferably with games.
lee.theasby@ntlworld.com

ATARI FOR SALE

Atari 2600 console for sale. 4 games, 2 joysticks, very good condition, collectors item. £50 ono. Buyer collects or pays postage. Manchester.
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Atari 800XL Computer - complete with all cables, original manuals, and official 1010 tape deck. Classic computer set up. £80.
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Atari 400 computer - original version. A slice of 70s home computing. Complete with cables. £70.
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Gorf by CBS for Atari VCS - boxed complete. An arcade classic. £25. Picture available.
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ATARI WANTED

Atari Jaguar and Atari Lynx plus games. Must be in full working order.
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Nintendo 64 Unboxed Game Console, 2 joypads, tranpak, rumble pak, and ten top title boxed games: Banjo Tooie, Donkey Kong, Diddy Kong Racing, Majora's Mask, Rogue Squadron, Shadows Of The Empire, V-Rally, Mission Impossible, Wipeout, F-Zero. £100.
mobileman100@hotmail.com
or call **Sil** on **07765 454585**

Nintendo 64 - including 4 games: FIFA 98 Soccer, Mission Impossible, V-Rally and GT64. £24 ono.
johnfitton@btopenworld.com
07764 836326

Nintendo Game & Watch Micro Vs System - Donkey Kong, Hockey, Mint and boxed as new (never played). £90.
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Nintendo 64 - boxed, hardly used, memory card, transfer pack, rumble pack, joypad, 4 games: Mario Party, Pokemon Stadium, Star Wars Racers, Banjo Kazooie. £40 ono.
julie.fallon@btopenworld.com
01204 364988

Nintendo Famicom Disk System. Boxed complete and recently serviced by Nintendo of Japan. In excellent condition. £200. Pictures available.
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Sharp Famicom Twin, Nintendo Famicom with built in disk drive. Rare system in excellent condition. £250. Pictures available.
retrobloke@aol.com

Nintendo 112 Racing Console - 1979 official console with built in steering wheel and paddles. One of the rarest consoles in the world, and this one is boxed complete! £800. Pictures available.
retrobloke@aol.com

Nintendo Block - 1979 Breakout console, boxed complete. An amazing addition to anyone's Nintendo collection. £400. Pictures available.
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Nintendo 6 - the first home console Nintendo ever released. Boxed complete. An incredibly rare machine, particularly outside of Japan. £500. Pictures available.
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Nintendo Famicom - Antatartic adventure by Konami. Boxed complete. £25 Picture available.
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Family Trainer 5 for Nintendo Famicom. For trainer mat only. Very rare, boxed complete. £25. Picture available.
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Final Fantasy by Squaresoft for Nintendo Famicom, boxed in very good condition, but without instructions. £50. Picture available.
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Hello Kitty World for Nintendo Famicom. Boxed complete, rare game. £40. Picture available.
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Nuts & Milk by Hudson for **Nintendo Famicom**. Boxed complete, rare game. £30. Picture available.
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Ultima by Origin - Rare Nintendo Famicom version. Boxed complete and in excellent condition. £45. Picture available.
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Parodius by Konami for Nintendo NES - unboxed cartridge in excellent condition. Classic shoot-em-up. £25. Picture available.
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Renegade by Taito for Nintendo NES - boxed complete in excellent condition. A real NES rarity. £25. Picture available.
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Final Fight for Super Nintendo - rare PAL version, cartridge only. £25. Picture available.
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Donkey Kong Country 3 for Super Nintendo - rare last Nintendo published game on the system. Cartridge only. £25. Picture available.
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Super Double Dragon for USA Super Nintendo. Boxed complete in near mint condition. £30. Picture available.
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Super R-Type by Irem for USA Super Nintendo - boxed complete in near mint condition. £30. Picture available.
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Vectrex Armor Attack - boxed complete with screen. £45. Picture available.
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NINTENDO WANTED

NES console in fully working order plus games. Preferably with Techmo World Soccer.
lee.theasby@ntlworld.com

NES wanted preferably in good condition with games. Will collect locally **(Manchester). Telephone**
07763 121155

SEGA FOR SALE

Sega Mega Drive - boxed, in excellent condition, 2 controllers and several games including: Sonic, Madden 93, Joe Montana 2, Afterburner 2 and others £30 ono pus postage costs if you can't collect.
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Sega Dreamcast Game Samba De Amigo - including maracas mat and game. Very rare, boxed as new. £100.
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Sega Mega Drive - approx 30 games, most boxed with instructions, some great titles like Sensible Soccer, Street Fighter 2, all the best games offers.
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Sega Game Gear TV Tuner - in near MINT box. Includes manual, but no poly inner. Unit in very good condition. The Holy Grail for Gamegear collectors. Pictures available.
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UK Gamegear - in near MINT Condition, complete with sealed instructions and strap. Excellent condition box, Columns game and instructions. All as originally sold. £100. Pictures available.
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Sega Megajet - the rarest of all Megadrives, a handheld MD which plugs into a TV. Requires step down transformer. Standard AV, suitable for most UK TVs. In boxed, MINT/Unused condition. £180.
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Sega SG1000-II console with controller. Fully tested, in very good condition. Excludes PSU, but uses standard 9v adaptor. Note TV Output is Jap RF Signal only. £200.
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Sega SC3000 Computer - H is for hard key version. Pal Australian, in very good condition but missing PSU so untested. Includes manual, Joystick and Basic cartridge. £80.
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Sega 32X expansion system for Megadrive. Allows you to play special 32X range or 32-bit games. Complete with all cables/PSU, and fully tested. VG condition, with box (no polys). £80.
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Dreamcast official Sega light gun, mint condition. £15 ono.
sales@retro-games.co.uk

Cosmic Carnage for Sega 32X. Unusual and hard to find official Sega game. Boxed complete. £35. Picture available.
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Yu Suzuki Game Works Book with free Dreamcast games - sealed mint, Japanese rarity. Includes bonus disc with arcade-perfect conversions of Out Run, Powerdrift, Space Harrier, Super Hang on and After Burner. £80. Picture available.
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Phantasy Star 3 for Sega Genesis. Boxed complete, in excellent condition. £40. Picture available.
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Virtua Fighter 2 for Sega Megadrive. The classic shoot-em-up in its rarest version. Boxed complete. £25. Picture available.
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If you need Retro, and nobody else can help, then you should try **www.retro-trader.com** Retro Games, Consoles, Computers, Toys, Films, Collectables, Cartoons, Software, Hand-Held Games, Carts, Books, Magazines, Too Many Brands To Mention, Information, Links. And with our new online shop opening soon you would be mad not to look! Email us on:
info@retro-trader.com

Toshiba MSX - complete in full working, very good condition. Includes joystick, and rare Konami Comic Bakery boxed cartridge in excellent condition. £70. Pictures available.
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Acorn Electron - boxed complete in excellent condition, box shows some wear, but machine is fantastic. Includes cables and manuals. £80. Pictures available.
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Philips CDI Machine with additional Video cartridge, allowing VCD playback. In fully working, very good condition. Complete with power cable and Remote control. Includes RF and AV outputs. £90. Pictures available.
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Goldstar 3DO System - boxed complete in excellent condition. Middle East PAL version, compatible with 3DO games from ANY region. Includes standard AV connection cable, so ideal for use in any country. £70.
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Issue 22 of Retrogames magazine - covers super rare Nintendo machines, unreleased Virtual Boy games, and rare Famicom, includes full Game & Watch price guide. £3, inc UK Postage.
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5000 Games, Consoles, Computers and handhelds for sale, at the world's biggest and oldest retrogaming site:
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Metal Slug 4 for Neo Geo AES, complete. Slight crack in case, otherwise mint. £160 ono.
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Circus charlie - boxed Konami Cartridge for MSX. Classic game, in excellent condition. £40. Picture available.
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Monkey Academy - boxed Konami Cartridge for MSX, MINT SEALED. £45. Picture available.
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Nemesis/Gradius 2 by Konami, boxed cartridge for MSX computers. In excellent condition. £50. Picture available.
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Super Cobra by Konami for MSX, boxed cartridge. Excellent condition. £45. Picture available.
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The Goonies by Konami for MSX, boxed cartridge. Excellent condition. Rare game. £50. Picture available.
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Samurai Spirits for Neo Geo AES Home cartridge console. Japanese version, boxed complete. £50. Picture available.
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No Exit for Amstrad GX4000. Incredibly rare game, boxed complete. £60. Picture available.
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20 Mixed Microdrive cartridges - used and have various applications and other software on them. £30. Picture available.
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Super Star Soldier by Hudson for PC Engine. Fully boxed Japanese version, in excellent condition. £35. Picture available.
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Arcade Classics by Namco for Philips CDI. Includes Galaxian, Ms Pac Man and Galaga. Rare title for the console, boxed complete. £25. Picture available.
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Zelda - Wand of Gamelon - for Philips CDI. Rare official Zelda game licensed from Nintendo. Boxed complete. £35. Picture available.
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Castlevania Dracula X for Japanese Playstation. Boxed complete with soundtrack CD. £35. Picture available.
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Mobile Suit Gundam for Japanese Playstation. Boxed complete. £25. Picture available.
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Parodius Deluxe Pack for Japanese Playstation. Boxed but without instructions. £30. Picture available.
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Dragonball Z 1 &amp - 2 for Super Famicom, boxed complete. £35 each. Picture available.
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Dragonquest V and Dragonquest VI for Super Famicom, boxed complete. £35 each. Picture available.
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Sailor Moon for Super Famicom. Just cart, but in very good condition. £30. Picture available.
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Super Street Fighter 2 for Super Famicom. Just cart, in very good condition. £25. Picture available.
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Ninja Ryukended by Tecmo, early Ninja Gaiden game. Boxed complete. £30. Picture available.
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OTHER WANTED

Wanted! Instant cash for your stations. We will give you the best price for your consoles and games. Collection within Manchester area.
Eccles Electric, 66-68 Liverpool Road, Eccles, M30 0WA
Mon-Sun 9am-5.30pm

Amstrad CPC464 including Colour monitor. Must be in working order, preferably with games.
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ANYTHING ELSE RETRO FOR SALE

MB Super Simon - boxed in excellent condition. Classic 70s party game. £70.
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ANYTHING ELSE RETRO WANTED

Atari playing cards featuring Realsports Football. A true collector's item. Given to distributors only. Mint Sealed. Picture available.
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Official Nintendo inflatable banana, used to promote Walls Donkey Kong Ic ecreams. A rare collectible. £15. Picture available.
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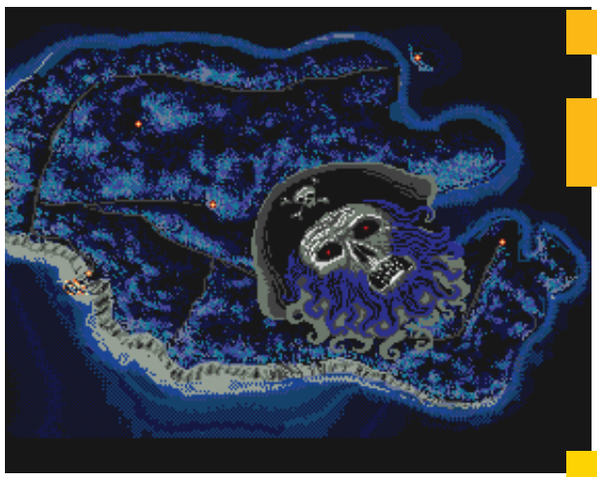
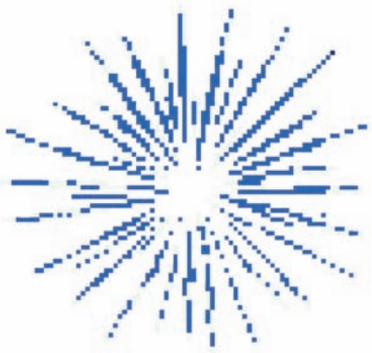
eMag

back in the day
When the pixel was king
ISSUE 3 HITS THE SHELV
15TH APRIL 200
RETRO GAMER
RETRO GAMER

Game endings rarely reward the time and effort you plough in. There are exceptions, such as The Secret of Monkey Island - an adventure game that signs off in style

Endgame



...Guybrush shakes the bottle of Grog and sprays its corrosive contents over LeChuck. The evil pirate begins to shake and choke, and his spirit is driven skywards, leaving nothing but a pile of bones on the premises of Stan's Previously Owned Vessels. The Blimp-Cam (TM) positioned high above Melee Island captures the moment as LeChuck's ghostly spirit explodes against the night sky. Governor Marley arrives and offers to buy Guybrush a root beer for his troubles. As they watch the final few explosions, the screen fades and the credits roll. Time to turn off your computer and go to sleep.